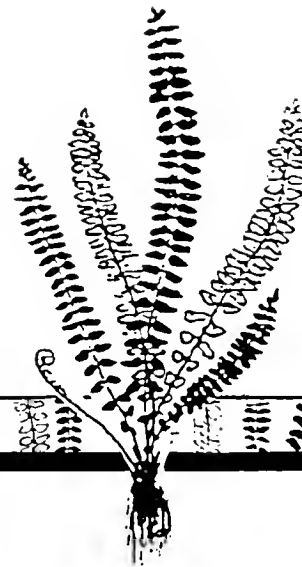


# Hardy Fern Foundation NEWSLETTER

Editor Sue Olsen • VOLUME 6 NUMBER 4 • FALL 1996



## PRESIDENT'S MESSAGE

Sylvia Duryee

Nature has a way of following the seasons, as we must also. The great aspirations of spring and summer quietly succumb to fall. For growing flora and some fauna fall and winter are resting and recouperating times - a rebuilding for the next efforts of spring. This we do also. However, we can direct our efforts for the future with planning and preparation. This reminds me that all the Satellite garden orders were filled and now the plants are well situated in their new homes not yet thinking of spring.

The HFF has done some planning and made preparations toward a planting at the Bellevue Botanical Garden, but for the present most of the ferns secured for the display will have to wait until spring for planting out.

There have been some new additions to our primary garden at the RSBG including *Dryopteris celsa*, *D. crassirhizoma*, *D. sacrosancta* (A Hardy Fern Foundation introduction) and *D. sublacera*.

John Putnam, Jan Pirzio-Biroli, Mayde Anderson, Steve Hootman, Richie Steffen, Guy Huntley and yours truly spent long hours at our primary garden on Sept. 17th resetting ferns needing more shade or water - and thinning some over crowded sites. Next we will reassess the various species and update our records. We hope you all do the same. The best information for our members comes from reports of those growing ferns. And all of us are interested in your successes or other results. Keep us informed!

The member plant requests were filled and sent out Oct. 15th and we hope they too will all be well established before winter.

Our Northwest Flower Show exhibit in Feb. '97 will be chaired by John Putnam with Jan Pirzio-Biroli and Herman Entz helping. This will again be a joint Educational Display with the Rhododendron Species Botanical Garden. Anyone wishing to help should call me at (206) 329-2062 or Jan Dalby at (206) 454-3447. Remember volunteers receive free admission to the show.

We had an enjoyable meeting with members of the American Fern Society and delegates to the American Institute of Biological Sciences meetings in Seattle this summer. As you know we helped with some of the tours and had a reception. At these times our members who were attending the conference and tours had a wonderful opportunity to meet many new and old friends. The whole affair of some 7 days was of great interest and enjoyed. Next time we hope more HFF/AFS members can attend the AIBS conference.

I have just collected spores of *Asplenium trichomanes* and *Polypodium hesperium* on Orcas Island and would encourage you to collect fresh spores from your sources for the spore exchange. Send them to Bubba Baxter and then try some new ones for yourself from the many species offered in this year's exchange listed in this issue.

Have a wonderful holiday season and may there be many new prothallia on your windowsill!



## Gift Ideas

Several items of interest have reached your editor's desk just in time for the holiday giving season. A lovely color calendar of New Zealand alpine flowers with proceeds to benefit the Otago Alpine Garden Group in Dunedin, N.Z. is available at a most reasonable cost - \$8.95 which includes airmail postage. Checks can be submitted in your own currency. (NZ banks will cash any checks from 30 different currencies so there is no need to convert payments to New Zealand dollars.) Your order should be sent to NZ Alpine Seeds, PO Box 10-075, Dunedin, New Zealand or The Secretary, Otago Alpine Garden Group, PO Box 1538, Dunedin, New Zealand. The outstanding photographs were taken by Steve Newall who promises to collect spores for us in return for an order or two!

The Garden Game is the latest project from Ampersand Press. The literature describes it as "a beautifully illustrated board game....involves players in moving through the growing season, feeding the soil, nurturing plants and collecting seeds for the next year. Plant the largest garden and save the most seeds and you are the winner!" The game retails for \$26.95. A companion game The Bug Game is available for \$13.95 plus postage. To place credit card orders call 1-800 624-4263 or mail your order to Ampersand Press, 750 Lake St., Port Townsend, WA 98368.

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## Thank You, Hardy Fern Foundation

Gerald J. Gastony, President  
American Fern Society

A hearty "thank you" to the Hardy Fern Foundation for the many events you hosted for the American Fern Society during our August, 1996 meeting at the University of Washington in Seattle. Your gracious hospitality provided a delightful opportunity to renew some friendships and initiate others in beautiful settings.

Expectations raised by the preview of these events in the January-February 1996 issue of the American Fern Society's *Fiddlehead Forum* were more than met by the obviously careful planning and execution of these activities by the knowledgeable and enthusiastic members of the Hardy Fern Foundation. Our tour through the extensive plantings of the Foundation's main display and test garden at

Weyerhaeuser's Rhododendron Species Botanical Garden on Sunday was enriched by the deep horticultural experience and knowledge Steve Hootman brought to his commentary as he led us through this beautiful setting. The Bonsai displays and garden shop opportunities were an additional treat. The box lunches and soft drinks served at the home of Barbara Carman were enhanced by the Carmans' hospitality and the lovely setting of their home. Although their spectacular view of Mt. Rainier was obscured by cloudy weather on this occasion, they did provide photographic evidence of what lay beyond the clouds, and their setting was lent an extra dimension of charm by the blooming of what must be one of the oldest and most impressive wisterias in that part of the country. Our trek through ferny haunts continued after lunch when we were escorted by caring Hardy Fern Foundation enthusiasts through their displays and the general plantings at Lakewold Gardens on Gravelly Lake in Tacoma. Our day's fern activities ended at the home and nursery of Sue and Harry Olsen. The refreshments, extensive plantings of native and exotic ferns and Japanese maple cultivars, professional nursery facilities, sunshine, and the good friendship of all our gracious hosts combined to generate a most congenial end to a pleasant and stimulating day.

On Monday, the Foundation's presence was again evident in the table settings and camaraderie of the annual American Fern Society luncheon. The Hardy Fern Foundation's program was capped by its Monday evening reception at the Faculty Club on the University campus. Steve Hootman fascinated the audience with the slide presentation of his recent trip to some virtually inaccessible areas of interior, mountainous China. The multifaceted program, reminiscent of the friendship and hospitality extended us last year by the San Diego Fern Society, reminded us again of the delightful and enriching experience to be had when fern friends get together.

On behalf of the American Fern Society, I thank the members of the Hardy Fern Foundation for your obvious care in arranging and hosting the excursions and social events that so enriched our annual meeting.



*Lunch at Carman's. L-R Dan Palmer, Joe Carman, Paul Penfield. Photo by Sue Olsen.*



## 1996 AFS Fern Forays

by Robin Halley - Newsletter Editor & Webmaster, San Diego Fern Society

Co-published with the San Diego Fern Society

Friday, 7:03, Phoenix, August 4, 1995. 103° It's gonna be a scorcher. A normal summer day in this sun-beaten town...and I have a job to do. Ooops. Last year's gig. *One more time...*

Friday, 6:25, Seattle, August 1, 1996. 54° It's gonna be a wet one. A normal summer day in the rainy Northwest...and I have a job to do. Who am I? Terry Dologist, Fern Detective.

The same jamokes that did last year's deal made me an offer I can't refuse. Adding 15 or more ferns to my personal list. My bein' a fern detective and all, I couldn't stay away.

Friday, 8:00. 60° and a light rain. The book said to bring rainwear. They got that right. The book also said to meet at the University of Washington in the parking lot 'cross from Haggett Hall. The parking lot's closed and nobody's 'round. All right, figured out the second problem. Ya gotta read. The tour starts at 8:30...

Friday, 8:17. The bus pulls up in front of Haggett Hall. Just a couple of folks bravin' the drizzle. By 8:30 we got 'bout 30 'thusiasts on board and we're ready to roll. A lot of folks from last year on board...and lots I don't know. Tourleader's are Laura Potash, Ranger, Mt. Baker-Snoqualmie National Forest (she wears a badge) and Ed Alverson, the Nature Conservancy. Eamest femists I recognize are Alan Smith, Carl Taylor, Sue Hollis, Ken Wilson, Dan Palmer, Ron Farrar, and John and Carol Mickel.

10:00 AM So, the first destination is the Snow Lake Trail. After 'bout an hour on the road toward the Snoqualmie Pass, the bus pulls into a big parking lot at the Alpenthal Ski area. The rain is still with us, off and on (more on) and some folks came without rain protection. Ranger Laura must've been a girl scout. She's prepared with trash can liner bags. She

hands 'em out to les miserables who make a head hole and two arm holes for an instant slicker. (Before the trip's over Laura also lends her umbrella and sweat shirt to the greenhorns)

The trail head is at the edge of the parking lot, so the lot of us venture right into old growth forest. About 50 yards up the trail, the leaders stop to talk about the Silver Fir, the American Hemlock, and our first fern, *Dryopteris expansa* (Spreading Wood Fern). The canopy is dense, but a few *Blechnum spicant* (Deer Fern) find spots where the sun sneaks through.

Along the trail we come to occasional open areas which are mostly what Laura calls "avalanche chutes." They look like places where rock falls wiped out the trees and 'cause of that there's nothing to stop accumulated snow from rumbling down the hill. At the edge of the open areas is where ya see most of the ferns. Plants of *Athyrium filix-femina* (Lady Fern) start a discussion 'bout whether they're this or that or somethin' else. *Athyrium cyclosorus* gets some votes as an alternate name.

Other ferns 'long the forest trail include *Adiantum aleuticum* (Aleutian Maidenhair), *Athyrium alpestre* (Alpine Lady Fern), *Cystopteris fragilis* (Brittle Fern), *Gymnocarpium disjunctum* (Oak Fern), and one little group of *Thelypteris qualpartensis* (Mountain Fern). More out in the open we find *Cryptogramma acrostichoides* (Parsley Fern) and its nearly identical twin *Cryptogramma cascadiensis* (Cascade Parsley Fern). The obvious difference? *C. cascadiensis* loses its old fronds each year; *C. acrostichoides* doesn't. One fern we only get to wave at. The *Phegopteris connectilis* (Beech Fern) grows in a crevice under a rock outcrop 'bout twenty yards up a slick rock face. With all the rain, none of the intrepid group wants to do a face plant.

As we go along the trail, cold and damp, people start droppin' off the back and headin' back to the bus. By the time we hear the lunch whistle, about a third of the group have left. Lunch in the rain was kinda funny...stalwart hikers eating their

box lunches hunched under slickers. Nuthin' like a soggy sandwich....

1:30 PM Those who are left continue up the trail for another half mile or so to a point overlooking Source Lake. Gorjuous. Really bootiful. Dozens of small waterfalls clambering down tree-covered and occasionally snow-covered hillsides. A creek directed by maidenhairs and lady ferns leads down to Source Lake which fills the bottom of this mountain basin.

So, back to the bus. Two-and-a-half hours up the trail. Forty minutes back down. Still raining, so everyone takes refuge in the bus for the trip back to the U of W. They won't be able to pry us out of this bus with a crow bar (or a raven bar). "Who wants to see one more fern?" We're really too easy.

The bus makes its way down a little side road. 'Bout 20 of us get off in the pouring rain to see one plant of *Polystichum andersonii* growing in a ditch under some other plants. *P. andersonii* IS interesting 'cause it grows a little bulbil ("keke" in Hawaii) 'bout three-quarters of the way down the frond. How they found that one plant is a whole different story!

The trip back to the U of W goes quickly. We're reminded by the tour leaders that almost all the vegetation in Washington is relatively young as the state was covered by glaciers up to 'bout a mile thick during the last ice age.

Saturday 8:15. Not so damp today. Of course today we're goin' through Stampede Pass to the dry east side of the Cascade mountains near Cle Elum lake to look at ferns that like it not so wet. Most of the same group as yesterday piles on the bus. Wendy Bome joins us as well as Paul Penfield, Charlie Werth, and Dave Conant. The tour leaders today are David Wagner and Ranger Laura.

10:00 AM So, 'bout an hour-and-a-half later we make our first stop. The bus pulls into a parking lot sorta nowhere and we all pile off. Dave Wagner explains that *Botrychium* (Grape Ferns) are found here. He says they like "forest meadow," the understory in an area where the forest floor is kinda flat. So, thirty or so of us

*continued on page 44*



venture into a nearby area that meets the description. Dave has marked a coupla plants (*Botrychium lanceolatum* and *B. multifidum*) and challenges us to find some more. So, we spend another 20-30 minutes shufflin' through the understory, following the trail of the wily Grape Fern. "Here's one." "Two more over here." Even found a coupla my own.

10:45 AM Back on the bus headin' for Cle Elum lake. On the way we wind through Roslyn, Washington...most famous as the site of the TV show, Northern Exposure. Course they have left a lot of the stuff the same as durin' the show ta bring in tourist bucks.

11:15 AM The bus stops in a vista point parking lot just above Cle Elum lake. It's lots drier here. Some serpentine rock outcrops. Dave Wagner 'splains that we find xeric ferns and close relatives here. And we're off. The hills are almost alive. Yesterday's rains got over here so some of the *Cheilanthes gracillima* (Lace Fern) and *Selaginella wallacei* (Wallace's Spike Moss) and *S. scopulorum* have uncurled some for us. *Cryptogramma acrostichoides* (Parsley Fern) and *Aspidotis densa* (Indian's Dream) are tattered but fairly abundant. A careful rock-by-rock exploration of the hill also turns up *Woodsia oregana* (Western Cliff Fern) and *Cystopteris fragilis* (Brittle Fern). Much of the fun for the amateur fern detective is movin' from group to group, listenin' to the professionals 'splain what it is, why it is, and what're its relatives.

12:45 PM So, a little more than an hour-and-a-half later, we're off to lunch. No rain today and we have tables. Same caterer, though, so lunch is the same as yesterday.

1:30 PM After lunch, the bus ventures up what looks like a logging road for 'bout 4-5 miles. Past Paris Creek and almost to Boulder Creek. 'Round a corner and look...there's *Adiantum aleuticum* growin' in full sun. Not even a sun hat. We stop. Before we get off the bus, Dave Wagner tells us that the real reason we're here is *Polystichum* soup. You got your *P. munitum* (Western Sword Fern). You got

your *P. scopulinum* (Crag Holly Fern). You supposedly got your *P. imbricans* (Narrow-Leaved Sword Fern) but we didn't find any. And, you got your hybrids...a cross between *P. scopulinum* and *P. munitum*. Those *Polystichum* species cross and back-cross, and uncross...

Dave Wagner notes as how he had scouted the place and found 'bout six of the hybrids. He challenges the troops to find those hybrids. Wendy Borne steps off the bus and looks at a plant 'bout four feet away. "How 'bout this one?" Dave looks at it. "Let's pretend we didn't see this one." Too easy. Lots of *Polystichums*, *Adiantum aleuticum*, *Pteridium aquilinum* (Bracken Fern), and *Aspidotis densa*. The *A. aleuticum* growin' in the sun is kinda yellow, sorta short, and grows very upright. The *A. aleuticum* growing in the shade is dark green, up to two-and-a-half feet tall (.75m) and draping.

3:45 PM End of the day. Took us so long to explore for *Polystichums*, we're gonna miss Asahel Curtis Nature Trail. I think everyone feels they got their money's worth. Goin' back through Roslyn we stop for a picture or two of the Brick and the General Store and it's back to the U of W.

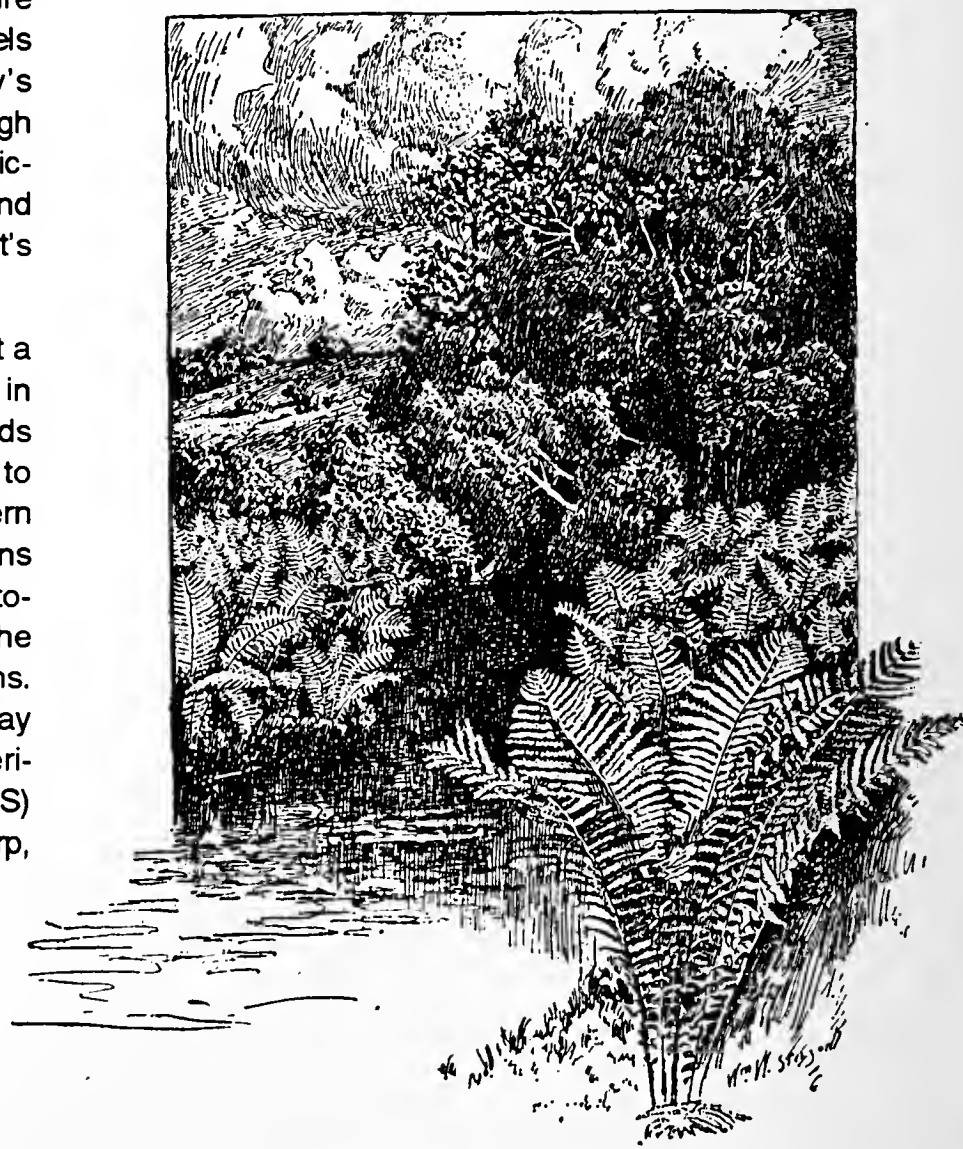
Sunday. 8:55 AM. Just a little drizzly. The bus in front of Haggett Hall loads up quickly and we're off to Tacoma for the Hardy Fern Foundation (HFF) gardens tour. The tour leader today is Sue Olsen of the HFF and Foliage Gardens. A coupla new faces today are Gerry Gastony, American Fern Society (AFS) President, and Joan Sharp, Sharplex Services.

9:50 AM We pull into the Rhododendron Species Botanical Garden parking lot at Weyerhaeuser Corporate Headquar-

ters. The gardens aren't quite open, so we do a quick tour of the outstanding bonsai display and the gift shop.

10 AM Garden Curator, Steve Hootman, gathers the group for an introductory talk 'bout the garden's history and we set off in search of ferns. The HFF's fern displays include nearly 100 species of hardy fern for our viewing pleasure. The garden is a 25-acre area featuring rhododendrons (only one in bloom), conifers, and other plant collections. This includes a rock garden, a bog garden, a pond, and acres of open forest floor. The displays of *Polystichum*, *Blechnum*, *Athyrium*, *Gymnocarpum*, *Asplenium*, *Adiantum*, *Osmunda*, and *Dryopteris* are stop-you-in-your-tracks beautiful. The loudest sounds in the gardens are the clicking of cameras and the whir of automatic film winders.

11:45 AM It's over all too soon. The group is shepherded back into the bus.



*Matteuccia struthiopteris*

(It's hard to get 30+ fern hunters to quit sleuthing) We're off to lunch at the home of Barbara Carman.

12:00 The Carman's have a most excellent home on the shore of American Lake. The weather is still very overcast, so Barbara supplies us with a picture of Mt. Rainier to show us what it would look like (virtual mountains?). The fernists settle in for lunch by the same caterer. Same lunch. A scramble for the vegetarian sandwiches by those tired of turkey. The Carmans provide buckets of fresh raspberries to augment the box lunches.

1:00 PM Off to the second garden tour. The afternoon tour is at Lakewold Gardens on Gravelly Lake in Tacoma. This 10-acre garden used to be privately owned, but has been made into a public display. Garden tours and wedding parties help finance the garden.

Strange and wonderful trees, flowers, and ferns provide ample oohs and aahs. The nearly three-foot-tall *Onoclea sensibilis* really stands out. The HFF also has a special display garden featuring hardy ferns.

2:30 PM In the bus again and heading for Bellevue WA and the home of Sue and Harry Olsen. The HFF has organized an afternoon delight.

3:15 PM HFF members greet the wandering pteridophiles with wine, soda, crackers, and cheese. Sue Olsen has 200-300 native and exotic ferns in gardens and greenhouses throughout the property. Although it's not most difficult or exotic, an Ostrich Fern (*Matteucia struthiopteris*) gets lots of attention. It's huge and has rows and rows of fertile fronds. The hardy ferns includes a lot of Polystichums, Dryopteris, and Scolies (*Asplenium scolopendrium*), as well as a buncha different Holly Ferns (*Cyrtomium*) and different types of Japanese Painted Fern (*Athyrium niponicum* 'Pictum'). When folks tire of ferns (do we ever?), Harry Olsen eagerly shares his large and varied (and variegated) collection of Japanese maple cultivars.

4:30 PM Back in the bus and off to U of W one last time. Many thanks to the AFS

and the HFF for making this weekend into fern detective heaven.

## Member Reports

Ed. We have been requesting fern evaluations from our members for many years and only received a few. We will begin printing them with this issue and have several for upcoming issues. We would be delighted to add yours (particularly on a disk in a microsoft format)!! Note some of these go back a few years!!!! A reminder - a grade of 5 is outstanding 1 poor and then there is 0!!!

### Jennifer B. Fox Memphis, Tennessee June 28, 1993

**Site description:** The majority of ferns are planted in a 30 foot long bed which runs North to South and faces West. It is backed by a board fence. The bed also contains 10 azaleas, a struggling oak leaf hydrangea which we transplanted from our land in Mississippi in early spring 1992, and two mature trees—a hackberry and a black cherry. The latter tree is in rapid decline. We plan to remove and replace it either this fall or next spring. A forsythia bush is also in this bed and some Virginia bluebells appear every spring among the autumn fern. There is also a planting of naked lily which was there when my husband bought the property in 1978.

*Adiantum capillus-veneris* (Southern maidenhair) — Condition 3. Purchased in spring 1992. Came back vigorously this year. 2 plants.

*Adiantum pedatum* (Northern maidenhair) — Condition 0. Bought in 1991. Struggled last year. In fact thought it was gone last summer, but noted a small sprig under some impatiens. Have not seen it this year. Had 2 plants.

*Asplenium platyneuron* (Ebony spleenwort) — Condition 2. Purchased in spring 1992. Struggled last year probably because site too shady. Moved this spring to a new location. Coming around. 1 Plant.

*Athyrium filix-femina* (Lady fern) — Condition 3. Purchased in 1992. Putting out a lot of new fronds. 3 plants.

*Athyrium niponicum* 'Pictum' (Japanese painted fern) — Condition 3. Purchased in 1992. Putting out a lot of new fronds. 3 plants.

*Cyrtomium falcatum* (Holly fern) — Condition 3. Bought in 1991. Clerk at nursery said it was marginally hardy here, but we have had mild winters since. Beautiful last summer; seems subdued this year. 2 plants.

*Dryopteris atrata* (*D. cycadina* Ed.) (Shaggy shield fern) — Condition 3. Bought in 1993. Doing well. 2 plants.

*Dryopteris erythrosora* (Autumn fern) — Condition 4. My first hardy fern planted in 1988 or '89. Divided this year and planted divisions in new garden bed. Started with 2 plants; now have 4.

*Dryopteris filix-mas* (Male fern) — Condition 3. Planted in 1992. 1 plant.

*Dryopteris ludoviciana* (Florida wood fern) — Condition 3. Bought 2 in 1990; added 2 more the next year. One of the originals is struggling while the other is 2 1/2 to 3 feet high. One from second purchase is doing very well; again the other is struggling. 4 plants.

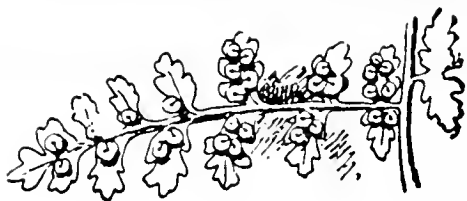
*Lygodium japonicum* (Japanese climbing fern) — Condition 4. Bought in 1990. Taking off this year; need to give it something taller to climb on. 1 plant.

*Onoclea sensibilis* (Sensitive fern) — Condition 4. Acquired from a friend in 1989. Doing well but wanders too much. 2 plants.

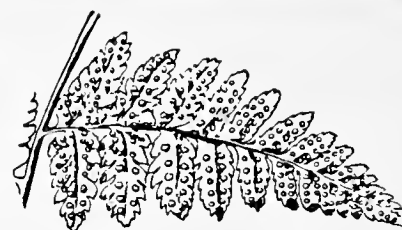
*Osmunda cinnamomea* (Cinnamon fern) — Condition 3. Bought in 1993. Doing well. 2 plants.

*Osmunda regalis* (Royal fern) — Condition 3. Bought in 1993. Doing well. 2 plants.

*Polystichum acrostichoides* (Christmas fern) — Condition 3. Dug in early March 1992 on our land near Iuka, Miss. Have two plants; one is doing quite well while the other remains smaller and less vigorous. 2 plants.



# William A. Plummer Painted Post, NY 1994



(Ed. note - My husband and I visited this lovely garden in Sept. 1996. Bill says that he has attempted to create a "woodland" garden that has a "woody" feeling. He has indeed succeeded. The deer think so too. Two were grazing in the front garden when we arrived. And I thought slugs were a problem!!)

Note - There have been some name changes since this was submitted. I'm using the original report.

Plant	Rating	Year Planted	# Alive	Comments
<i>Adiantum aleuticum</i> 'Subpumilum'	-	1994	1	
<i>Adiantum pedatum</i>	5	1965	}20	Original plant covers 6 sq. ft.
<i>Adiantum pedatum</i> 'Aleuticum'	-	1994	}10	
<i>Adiantum pedatum</i> 'Japonicum'	-	1994	1	
<i>Adiantum venustum</i>	5	1974	10	Delightful
<i>Asplenosorus x ebenoides</i>	1	1993	2	
<i>Asplenium trichomanes</i>	5	1966	2	One growing in south-facing wall
<i>Athyrium filix-femina</i>	4	1964	}10	Spreading
<i>Athyrium filix-femina</i> 'Cristata'	4	1991	1	
<i>Athyrium filix-femina</i> 'Purpurea'	5	1970	2	
<i>Athyrium niponicum</i> 'Pictum'	5	1970	}10	Self spored
<i>Athyrium pycnocarpon</i>	4	1970	{10	
<i>Botrychium virginianum</i>	3	1966	2	Endemic in area
<i>Cyrtomium fortunei</i> var. <i>intermedia</i>	2	1990	1	
<i>Cystopteris bulbifera</i>	4	1970	}10	Invasive
<i>Cystopteris fragilis</i>	4	1990	12	
<i>Dennstaedtia punctilobula</i>	3	1968	}10	
<i>Diplazium</i> sp.	0	1993	0	
<i>Dryopteris affinis</i> 'Crispa'	-	1994	1	
<i>Dryopteris atrata</i> (cycadina)	-	1993	1	
<i>Dryopteris clintoniana</i>	4	1970	{10	
<i>Dryopteris crassirhizoma</i>	-	1993	1	
<i>Dryopteris erythrosora</i>	2	1990	4	Disappointing
<i>Dryopteris erythrosora</i> 'Prolifica'	-	1994	1	
<i>Dryopteris goldiana</i>	5	1970	}10	Impressive
<i>Dryopteris marginalis</i>	5	1964	}10	One slowly recovering from deer
<i>Gymnocarpium dryopteris</i>	5	1970	}10	
<i>Matteuccia struthiopteris</i>	3	1970	}10	Invasive
<i>Onoclea sensibilis</i>	4	1964	}10	Large colony; endemic
<i>Osmunda cinnamomea</i>	5	1965	}10	Endemic
<i>Osmunda claytoniana</i>	5	1965	}10	
<i>Osmunda regalis</i>	2	1970	{10	Original plant may need more sun
<i>Osmunda regalis</i> var. <i>regalis</i>	-	1993	1	
<i>Osmunda regalis</i> var. <i>r.</i> 'Undulatifolia'	-	1993	1	
<i>Phegopteris decursive-pinnata</i>	-	1994	1	
<i>Phyllitis scolopendrium</i>	0	1993	0	Used limestone pellets; did not live
<i>Polypodium virginianum</i>	3	1970	}10	
<i>Polystichum acrostichoides</i>	5	1964	}10	One of the best; endemic
<i>Polystichum braunii</i>	5	1972	3	
<i>Polystichum polyblepharum</i>	-	1993	1	
<i>Polystichum setiferum</i>	-	1994	1	
<i>Polystichum tsus-simense</i>	-	1993	1	
<i>Pteridium aquilinum</i>	1	1964	}10	Endemic
<i>Thelypteris hexagonoptera</i>	4	1970	}10	
<i>Thelypteris novaboracensis</i>	3	1970	}10	

Years are approximate. The house was built in 1964

# Theylypteris Hexagonoptera

James R. Horrocks

Theylypteris is derived from the Greek word "thelys": a female, and "pterus": a fem, referring to the more dainty nature of the female gender. The name was probably first used by the Greek botanist, Theophrastus. Hexagonoptera means "six-angled-winged" and refers to the unique way in which the pinnae connect to the midrib of the frond. This attachment of pinnae with irregularly shaped wings along the rachis is also characteristic of Theylypteris phegopteris and Theylypteris decursive-pinnata. Classification has been confusing, since, all three of these species have been known under Dryopteris and more often, Phegopteris. The fronds of Theylypteris hexagonoptera are noticeably larger, more erect, and softer in texture than those of Theylypteris phegopteris. The large triangular fronds are also distinct from Theylypteris decursive-pinnata, the Japanese Beech fern, since the latter has narrow fronds that taper at both ends.

This truly eastern North American species is commonly known as the Broad Beech fern or Sourthern Beech Fern and ranges from eastern Canada to the Gulf states, but seems more abundant in the South. Its westward range is to eastern Texas and Ohio. The Broad Beech fern grows in rather open to deep shaded woods, preferring moist soil and is often found along the margins of swamps.

**Description:** The rapidly-spreading rhizome is cord-like, bearing scales, creeping and branching just below the soil surface. The fronds appear at 1/2 to 2 inch intervals, giving the colony a rather dense, compact effect. The stipe is slightly longer than the blade. The fronds seem to consist of large pinnatifid segments rather than separate pinnae. These segments are connected to the rachis by a curious wing and are spaced opposite each other. The fronds are 12 to 24 inches long, twice divided into deeply cut segments and triangular in shape, being

broader than long in some cases. The upper segments taper gracefully and are deeply lobed. The basal segments taper both toward the rachis and toward the tip, being widest about 1/2 the length of the segment. The basal segments are set apart from the rest in being larger and stretching obliquely outward and downward. The fresh green fronds are produced freely and continuously, but being deciduous, succumb to the first frost. The crosiers have a peculiar venation, the lower and middle segments opening diagonally upward while the apical section unfolds vertically. The undersurface of the fronds bear fine hairs and a few narrow scales, especially on the midrib. This gives the fronds a soft velvety feel. The sori are small, round, and not uniform in size. They are found irregularly spaced between the midrib and the lobemargins. They lack an indusium and there is considerable variation in the number of sporangia.

**Culture:** Theylypteris hexagonoptera grows best in dappled shade in moist, humus-rich, moderately acid soil. Having a shallow, branching rhizome that lengthens rapidly, this species tendency to "spread far and wide", as Wherry cautions, "is to be anticipated". For this reason, it may not be suitable for a small garden. The striking triangular fronds are very attractive and have a softening effect in the garden. This species is not particularly suited for drier cli-

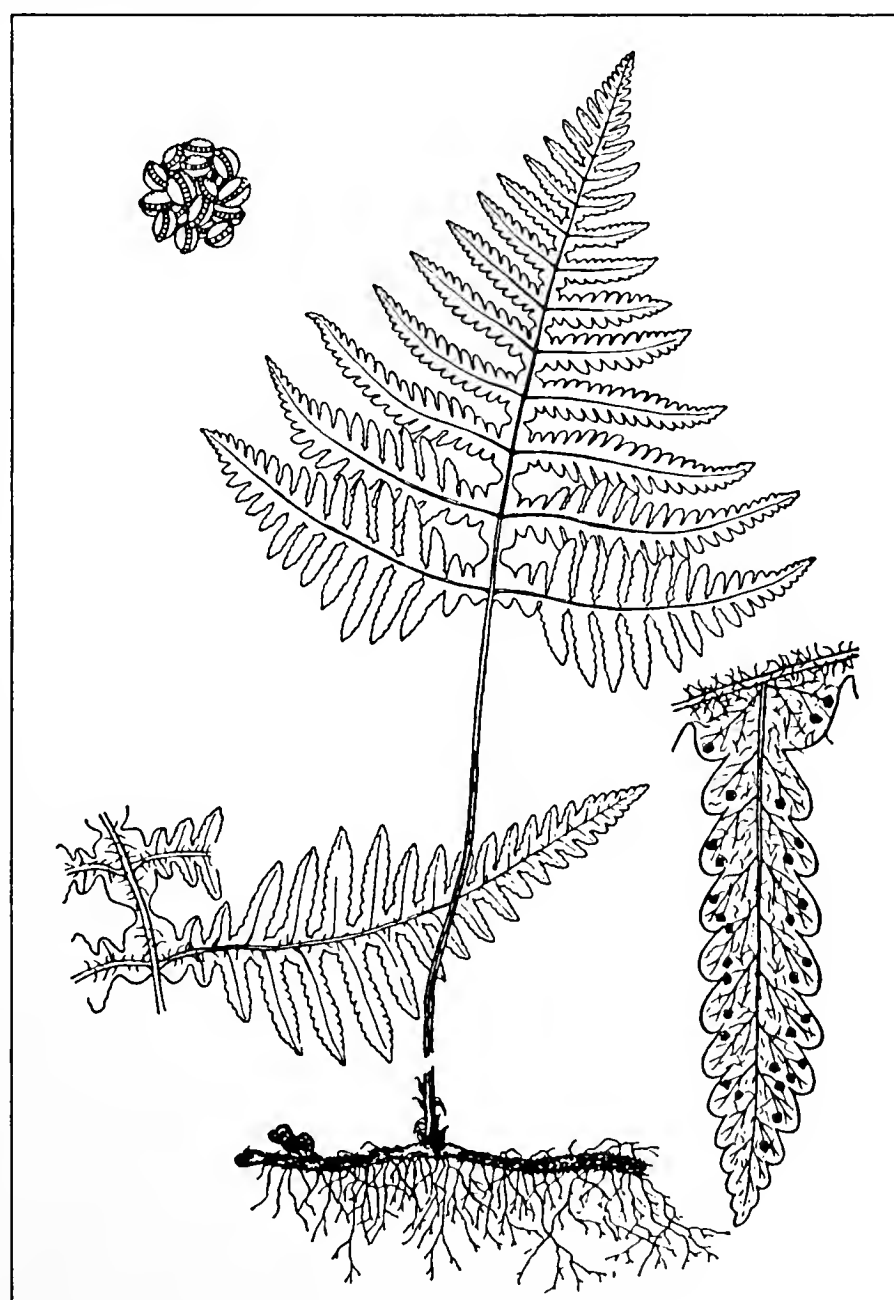
mates, needing ample moisture and humidity to be at its best. Where there is enough room, the Broad Beech Fern forms a lovely colony in a comparatively short time.

**References:** The Fern Guide, 1961, Edgar T. Wherry, Double Day, New York.

Field Book of Common Fern (Revised Ed. 1949) Herbert Durand, G.P. Putnam's Sons, New York.

Ferns to Know and Grow (Revised Ed. 1984) F. Gordon Foster, Timber Press, Portland.

Ferns for American Gardens (1994) John T. Mickel, Macmillan Publishing Co., New York.



Southern Beech-Fern: *Theylypteris hexagonoptera*



# SPORE EXCHANGE LIST

## HFF 1996 Spore Exchange

Well, it's that time of year again. There are not as many different ferns this year and some of the spores are getting a little old. We need to get out there next year and collect as many different ferns as are available to us and share them with your fellow fern lovers from around the world. Maybe we as an organization can help bring some rare fern back from the brink of extinction. Perhaps each of us, by getting out there in the woods, can learn more about the different ferns that grow in our region. So lets all do our best next year and get this exchange going!!

The descriptive columns are common name (**COM NAME**), packets available (**PK**), coldest zone reported for this fern (**Z**), size in inches (**SZE**), growth habits (**GRO**) as delineated in the key below, if collected in the wild (**COLL SITE**), native habitat (**ORG**).

The information should be taken as advisory in nature your results may vary. If any member has reliable information that should be added (or changed) to the list, please forward that information with your spore donation or request.

1	Rare fern	L	Soil specific
2	New fern	R	Rocky soil
3	Few spore	C	Climber
\$	Green spores	J	Epiphytic
\$\$\$	Green spore Donor	B	Tree fern
A	Alkaline soil	G	Spreadg habit
Z	Acid soil	K	Terrestrial
D	Dry soil	F	Aquatic
W	Wet soil	V	Deciduous
N	Moist soil	O	Evergreen
S	Shade	Y	Dimorphic
T	Part sun	E	Easy to grow
U	Bright sun	Q	Hard to grow
H	High Humdty		

**To Order:** Please print your selections clearly in alphabetical order using the scientific name. Include **25 cents** for each fern requested (check payable to the Hardy Fern Foundation) and a **Self-addressed stamped envelope**. No charge for overseas members, but please enclose an international postal coupon (2 for large orders) and an envelope. **Maximum order** 25 per year.

Mail Requests to:  
Wayne "Bubba" Baxter  
307 Riverdale Cir  
Stephenson, Va 22656  
Email fernbubb@visuallink.com

The whole exchange, HFF and AFS, can be accessed on the American Fern Society HomePage located at:  
<http://www/visuallink.com/fern>.

Then simply push the Spore Exchange button. The list is updated whenever there is a lot of new donations and, of course, when I can get time to mess with it.

If there is any HFF member who would like to work on the HFF homepage please contact Bubba at the address above.

The people listed below are the only donors for the year and many of them are from the American Fern Society. These are the people that are carrying the exchange for all of us. They should be heartily commended.

Brian	Aikins
Shane	Barry
Stephen	Coppins
Sue	Entz
Iris	Gaddis
Owen	Hammerberg
Kenneth	Hanover
Michael	Heim
Jocelyn	Horder
Yoji	Kitaoka
Gerald	Kranz
Jean	Lundberg
Don	Lupin
Sue	Mandeville
Denia	Mandt
Judy & John	Marley
Peggy	Mcgill
John	Mickel
Jens	Nielson
Sue	Olsen
Frank	Pepi
Peter	Podaras
Fran	Rice
Dorothy	Skula
Dean	Sliger
Carolyn	Stamm
Terry	Turney
Joost	Veldkamp
Janet	Yang
Daniel	Yansura



HFF	GENUS	SPECIES	CVR	COM. NAME	PK	Z	SIZE	GRO	COLL.SITE	ORIG	DONOR
1	Adiantum	aleuticum		Aleutian ,westrn	25	4	12	TKGEL	Wa.	PacNW Jap	96/10 94/97
2	Adiantum	aleuticum	serpentine ecotype	aleutian ,westrn	10	2	12	GJTELN	cascade mts	alaska,nw usa	92/25
3	Adiantum	capillus-veneris		Venus.SouthernMaidnhairfem	8	7	24	EASNH		Pantrop	96/156 95/9
4	Adiantum	hispidulum		RosyMhrRoughMdnhr	25	8	14	SNTEZ	Aus	AusEHemTrop	95/9,157,1
5	Adiantum	pedatum		AmerMaidenhairFiveFingerFr	70	2	20	ENSZK		US Jap	95/18,108
6	Adiantum 1	aleuticum	subpumilum	DwarfMaidenhairAleutian,	13	4	12	ZSNEG		NW N.hem	96/20 95/36
7	Adiantum 1	Pedatum	Subpumilum	Maidenhair Fem	10	3		NSZ		US	95/8
8	Adiantum 3	diaphanum		Filmy Maidenhair	5	8	10	EWSHZ		Aust,NZd, FiiL	94/9
9	Allantodia	Australis			8	7	48	BTWK	Mt Garret, Tasmania	AusNZ Tasm	
10	Arachniodes	Adiantiformis			8	8					94/9
11	Arachniodes	aristata		PricklyShield fern	1	6	36	SDKZN		Easia, aust.	94/156 93/9
12	Arachniodes	aristata	variegata	EastIndianHolly,PricklyShield	20	6	36	SZND		Easia, Aust.	96/10,156
13	Arachniodes	miqueliana			8	5	24	GK		Easia	95/12 92/43
14	Arachniodes	simplicior		Variegated Shield fm	15	6	30	EKTZM		Easia	95/160,170
15	Arachniodes	simplicior	variegata	Variegated shield fm	5	7	30	SNEM		Easia	96/146 94/145
16	Arthropteris	Orientalis			10	8	18	ZSJV		Afr	94/149
17	Aspidium	aculeatum			5	6				Eindies	94/9
18	Asplenium	adiantum-nigrum	adiantum-nigrum	Black spleenwort	50	6	14	RANT	Hawaii,Switz	Eur.NA,Af	96/45 95/9
19	Asplenium	adulterinum			14	5	8	RZD	Italy	EurTibet	96/45 94/9,12
20	Asplenium	billoti		LanceolatumSpleenwort	10	5	10	QZTK		Eur	95/10 94/9
21	Asplenium	bulbiferum		mother spleenwort	2	6	36	NJZHS		AusNZ	95/9 94/141
22	Asplenium	castaneum			4	7	10	NK		Mex	94/34
23	Asplenium	cuneifolium			16	6		R	Bohem,CzechSwitz	Eur	94/45
24	Asplenium	fissum			6	6	8	RAN	Germ	WasiaSeurop	94/9,45
25	Asplenium	flabellifolium		Necklace fern	6	7	12	GSNZKJ	Victoria,Aus	Aus NZ	95/53
26	Asplenium	flaccidum	terestre	terrest. weeping spleenwt	8	8	30	NTK		Aus	96/164 94/110
27	Asplenium	fontanum		SmoothRockSpleenwt,	8	5	5	ZNRSG		Eur	94/9,45 97
28	Asplenium	forisense			25	8	6	ATRN		Eur	95/135 94/9
29	Asplenium	Hybridum			2	7	10	ZK		Medit.	
30	Asplenium	incisum			5	4	10	ZYK		NE Asia	94/45
31	Asplenium	Incisum	Moule		4	7	10	ZRSNK		NE asia	96/45 93/100
32	Asplenium	lucidum		Shining spleenwort	1	8	24	KSNA		NZ	94/149
33	Asplenium	Lunulatum			1	8	18	SH		S.Af	95/53
34	Asplenium	marinum		sea spleenwort	4	6	10	QNTR		EurAf	94/9
35	Asplenium	nidus		Bird's Nest Fern	60	8	60	HZNTJK		N.Guin,jap,ryukyu	95/9,166 94/11
36	Asplenium	obliquum		shining spleenwort	5	8	48	KATNH		NZ	92/116
37	Asplenium	oblongifolium		Shining Spleenwort	20	8	48			Nz	95/9,11
38	Asplenium	obovatum		Lanceolate spleenwort	5	7	12	ATNH		EurMadSt-Helna	92/104
39	Asplenium	obovatum	lanceolatum	Lanceolatum spleenwort	10	7	6	ATNH	Switz	Eur	95/9 94/154
40	Asplenium	pinnatifidum		lobed spleenwort	4	5	5	ZNSK		E USA	96/10,8
41	Asplenium	platyneuron		Ebony spleenwort	15	4	18	DAENT	N.Va,NJ,Me	E USA	96/8 95/108
42	Asplenium	Platyneuron	Incisum	Ebony Spleenwort	5	4	18	DAENT		E.US	94/131
43	Asplenium	Prolongatum			8	8	16	KSZ		EAsia	95/27
44	Asplenium	rhizophyllum		walking fern	10	4	6	ANTKO		NAm	96/173 94/9,8
45	Asplenium	ruta-muraria		Wall-rue	50	4	5	QANU	Switz	N. Hem	96/45 95/9,150
46	Asplenium	scolopendrium		harts-tongue, scollies	8	6	12	ANSKO		NHem	94/150,152,97
47	Asplenium	Scolopendrium	Supra marginatum	Harts Tongue fm	10	6	12	ANSKO		NHem	94/155
48	Asplenium	trichomanes		Maidenhair spleenwort	8	2	9	ANTKO	Me.	Cosmo	96/164
49	Asplenium	trichomanes	Incisum	Incised Maidenhair	20	2	9	ANTE			94/36,45 92/20
50	Asplenium	trichomanes	quadrivalens	Maidenhair spleenwort	15	2	9	ANTE	Switz	Eur	95/9 94/45,154
51	Asplenium	trichomanes	trichomanes	Maidenhair spleenwort	6	2	9	ANTE	Switz	Eur	95/61 94/45
52	Asplenium	viride		Green spleenwort	20	4	6	QARNK	AlpsAus	N. Hem	96/45 95/2,9
53	Asplenium 1	Dahlhousia			2	7	10	RK		Azores	
54	Asplenium 1	onopteris		Acute-leaved Speerwort	35	6	8	RZKNT		Eur	96/45 95/9
55	Asplenium 1	septentrionale		forked spleenwort	70	4	6	QZDTK	Italy	NHem	96/45
56	Asplenium 1	septentrionale	septentrionale	forked spleenwort	3	4	5	QZDT		N. HEM	95/9,2
57	Asplenium 1	Trichomanes	Hastatum	Maidenhair spleenwort	3	2	9	ANTE	Switz	Switz	94/45
58	Asplenium 1	x ebenoides x hemionitis		Aikins Spleenwort	1	5	12	ANRK	BrianAikinskitchen	BrianAikinskitchen	96/1
59	Asplenium 1 3	x lusaticum			1	5			Germ	Germ	94/45
60	Asplenium 1 3	x poscharskyanm			3	5			Germ	Germ	94/45
61	Asplenium 2	rhizophyllum	large form	walking fern	10	4	12	ANTKO		NAm	96/173
62	Asplenium 2	trichomanes	Moravicum	Moravian Maidenhair	4	2	9	ANTKO	Moravian	Moravian	96/45
63	Asplenium 2	trichomanes	Small	Maidenhair spleenwort	2	2	9	ANTKO		Cosmo	96/173
64	Asplenium 2	trichomanes	x Asp. Platyneuron	Maidenhair spleenwort	2	2	9	ANTKO		Cosmo	96/173
65	Asplenium 3	trichomanes	lucanum	Maidenhair spleenwort	3	2	9	ANTE			92/45
66	Asplenoceterach	x Badense			5	8				Greece	95/61
67	Asplenosorus	x ebenoides			7	7					96/36
68	Astrolepis	sinuata			5	6	10	AUDK		TexMex	95/11
69	Athyrium	angustum	rubellum	Nothern lady fern	3	3	48	ZNTKEV		N.Hem	94/141
70	Athyrium	asplenoides		Southern Lady Fern	20	4	48	EKNZS		SE USA	94/9 93/9 92/9
71	Athyrium	deltoidofrons			3	6	24	TK		Jap,Ch,Kor	93/45 92/88
72	Athyrium	distentifolium		alpine lady fern	8	3	24	RTVK	Germ,Austria 1800m	far N Hem	95/12,8
73	Athyrium	filix-femina		LadyFern.GreenStemmdLady	40	3	48	ZNTKEV	N.Va,SW Mich	N. HEM	96/174,161
74	Athyrium	filix-femina	Angustum	LadyFern.GreenStemmdLady	5	3	48	ZNTKEV	N.Va,SW Mich	N. HEM	96/129
75	Athyrium	filix-femina	Asplenoides	LadyFern.GreenStemmdLady	2	3	48	ZNTKEV	N.Va,SW Mich	N. HEM	95/9
76	Athyrium	filix-femina	Bornholmiense	lady fern	10	3	48	ZNTKEV		NE N. Hem	
77	Athyrium	filix-femina	cristatum	lady fern	15	3	48	ZNTKEV		N. HEM	96/174 95/141
78	Athyrium	filix-femina	Curium cristata	lady fern	3	3	48	ZNTKEV		N. HEM	94/45
79	Athyrium	filix-femina	Cyclosorum	northwestern lady	10	3	48	ZNTKEV	Oreg	NW N.Hem.	93/97 92/9,26
80	Athyrium	filix-femina	Minutissimum	lady fern	20	3	48	ZNTKO		N. HEM	96/174 95/2
81	Athyrium	filix-femina	multifidum	Lady fern	3	3	48	ZNTKO		N.Hem	94/141
82	Athyrium	filix-femina	redstipes	lady fern	5	3	48	ZNTKEV	Hamburg,Germ	N. HEM	93/12
83	Athyrium	filix-femina	rubellum	Red stemmed Lady Fern	50	3	48	ZNTKEV	N.Va,Me	N. HEM	95/156 94/5
84	Athyrium	filix-femina	Rubripes	Red stemmed lady fern	8	3	60	ZNTKO			94/148
85	Athyrium	filix-femina	Sitchense	lady fern	4	3	48	ZNTKEV		N. HEM	
86	Athyrium	filix-femina	Vernoniae cristata	lady fern	20	3	36	ZNTKEV		N. HEM	96/174
87	Athyrium	filix-femina	Victoriae	QueenofGreen,VictorianLady	8	3	48	ZNTKE		N. HEM	96/10
88	Athyrium	iniponicum			10	4	18	ZNTV		Easia	94/9 93/18
89	Athyrium	iniponicum	Pictum	Japanese Painted Fern	60	4	18	ZNTVE	SW Mich	Easia	96/174,144,179
90	Athyrium	iniponicum	Pictum Eco-dwarf	Japanese Painted Fern	5	4	12	ZNTVE	SW Mich	Easia	96/179

HFF	GENUS	SPECIES	CVR	COM. NAME	PK	Z	SIZE	GRO	COLL.SITE	ORIG	DONOR
91	Athyrium	niponicum	Suboulum		10	4	18	ZNTV		Easia	
92	Athyrium	otophorum		auniculate lady fern	20	4	24	SKENT		Easia	96/146
93	Athyrium	pyncocarpum		American Glade Fern	20	4	48	JANTVK		N Am	96/156
94	Athyrium	Thelypteroides		Silvery Glade Fern, Silvery	20	4	36	TWZV	Me	NHemindia	94/5,120 93/9
95	Athyrium	vidalii			20	5	24	TKE	Jap	Ko, Jp, Tai	94/45 92/9,88
96	Athyrium	lyokoscense			4	4	10	K		Kuriles, Easia	94/45 93/36,45
97	Athyrium 2	niponicum	Pictum crested form	Japanese Painted Fern	1	4	18	ZNTVE		Easia	96/174
98	Athyrium 2	niponicum	x wildwood ancient jade	Japanese Painted Fern	3	4	18	ZNTVE	SW Mich	Easia	96/174
99	Athyrium 3	alpestre		alpine lady fern	3	4	24	QRSKV		EurN.AM.	95/1 94/9 93/97
100	Athyrium 3	filix-femina	Corymbiferum	lady fern	6	3	48	ZNTKO		N. HEM	96/174 94/45
101	Athyrium 3	filix-femina	Polydactylus Darley Dale	Lady fern	1	4	48	ZNTKO		NHem	94/45
102	Athyrium 3	iseanum			3	6	24	ISK		Ja, Tai	94/9 92/36
103	Athyrium 3	rubripes			1	6				Siberia	94/45 93/9
104	Athyrium 3	spinulosum		Spinulose Lady frn	4	4	24	SNKE		Easia	94/45
105	Azolla \$\$\$	Caroliniana			10	8	1	EFWGH		N Am	95/2
106	Azolla \$\$\$ 2	Filiculoides		Ferny Azolla	10	6	1	EFWGH		Cosmo	95/2
107	Blechnum	Ambiguum			20	8		K	Aus	Aus	95/106
108	Blechnum	Banksii			10	8		KTN	NewZeal	NZ	95/37
109	Blechnum	chambersii		lance water fern	25	8	16	WK	AusNZ	Aus, NZ, Poly	96/110,36
110	Blechnum	discolor		crown fern, Pui-Pui	20	5	38	WTKN	NZ	NZ	95/9
111	Blechnum	filiforme		Thread fern	10	8	16	CGESW	NZ	NZ	
112	Blechnum	fluviatile		Ray water fern	40	8	24	RSHWK	NZ	Aus, NZ	96/36
113	Blechnum	minus		Soft Water frn	20	6	40	WOTK	AukNz	Aus, NZ	95/9,106 94/37
114	Blechnum	minus x wattsii		Hybrid Water Fern	5	6	12	WUK	Vict Aus	AusNZ	
115	Blechnum \$	nudum		Fishbone water fern	50	8	40	SZWNK	Aus, Tasmania	Aus, Af	94/106
116	Blechnum	penna-marina		Alpine Waterfern, LittleHard	10	5	9	GUOW		NZ	95/160
117	Blechnum	Procerum		Common Hard fern	10	8	30	KS		EindiesMexNZ	95/9
118	Blechnum	spicant		Ladderfrn, Deer, Hardfrn	30	5	28	ZESWY	Wash, Bohmeia	N. Hem, Pac nw	96/36,34
119	Blechnum	spicant	incisum	Ladderfrn, Deer, Hardfrn	10	5	28	ZESWY	Denmark	N. Hem, Pac nw	95/160
120	Blechnum	spicant	Redwood giant	giant ladder fern	10	4	30	NTYK		N Calif	94/4
121	Blechnum	vulcanicum		Wedge Waterfrn, Mountain	2	6	30	SWRQ	NatPknz, Tasm	Aus, NZ	93/53
122	Blechnum	wattsii		Hard water fern	23	7	48	WSOH	Aus	AusNZ	95/53,106,167
123	Blechnum 2	Capense ?			5	7			NZ	NZ	96/36
124	Blechnum 2	Lehmannii			10	8					96/162
125	Botrychium	dissectum	obliquum	grape fern	55	4	8	QLZTNK	N.Va	N Am	93/120
126	Botrychium	texanum			4	8		QLZT	Kobe, Jap	Japa	93/43
127	Botrychium \$\$\$	Virginianum		Rattlesnake fern	1	4	16	QZVSK	Maine	NAm.	95/8
128	Campylosorus	rhizophyllus		Walking Fern	3	4	6	NTAOK		E NAm	96/161 95/8
129	Campylosorus	angustifolium		Cen Am strap fern	15	8	24	HSNJ	Mex	C&S Am	96/164 95/165
130	Ceterach	dalhousiae			5	8	6	K		SW N Am, N India	95/160
131	Cheilanthes	alabamensis		Alabama Lipfern	8	6	18	DUAK		S. US, C Am, W indies	92/104
132	Cheilanthes	argentea		silver cloak fern	8	4	6	DUZK		Nasia, Siberia	96/150 95/150
133	Cheilanthes	Distans		WoollyCloakfrn Bristly Lipfern	15	7	7	DTZK		Aus, NZ	96/1,18 92/104
134	Cheilanthes	Eatonii		Eatons lip fern	8	4	10	DUAR		SW US	94/20,145,146
135	Cheilanthes	lanosa		Wooly, or Hairy lipfern	25	5	12	NSZK	Me	Se N. Am	95/8 94/9,18,
136	Cheilanthes	lasiophylla		wooly lip fern	6	8	15	DUK		Aus	95/150 93/104
137	Cheilanthes	lindheimeri		FairySwords, Lindheimer's Lipf	3	8	10	DUGK		SW US	96/36 93/104
138	Cheilanthes 1	lindigera		Beaded Lip Fern	5	8	10	DUKE		S. Tax, Az, Mex	94/11
139	Cheilanthes 2	Humilus			5	7			NZ	NZ	96/36
140	Cheilanthes 3	notholaena	marantae		2	6		DU	Cauc.	Caucasia	94/45
141	Christella	subpubescens			8	8	24	QSWK	Ryuky, Jap	JpAusMalay	93/43
142	Colysis	wrightii			3	8	12	NR	Jap	Easia	94/27
143	Coniogramme	intermedia			11	7	36	GWTZO		EasiaIndia	95/106
144	Coniogramme	japonica		Bamboo fern	5	7	48	NSK		E. asia	95/157 93/9
145	Cornopteris	crenulatoserrulata			15	6	36	SNK		Easia	95/12
146	Cryptogramma	acrostichoides		Parsleyfrn, Am. Rock Brake	50	2	10	ZURDA	Ramona Fils, eagl crk	W US	94/1 92/97
147	Cryptogramma	Crispa		Parsleyfrn, Asiatic Rock Brk	25	6	8	NUAK	Norway	EurWasiaAf	96/20 95/36,9
148	Ctenitis	Maximowicziana			12	8	24	KO	Jap	Jap	95/88
149	Ctenopteris \$\$\$	heterophylla			10	7	10	YMJ	VictAusl	AusNZ	95/53
150	Culcita	Macrocarpa			3	8		KT		SpainAzores	95/9
151	Currania 3	dryopteris			1	6	9	GNSK		NHem	92/9
152	Cyathea	australis		Rough tree fern	40	8	120	BUZNK	Melb Aus	Aus, NZ	96/87 95/106
153	Cyathea	Brentwood		lacy tree fern	20	8	200	B		Aus	96/87
154	Cyathea	cooperi		Australian, Lacy tree fern	20	8	200	BWTK	NZ, Nambor Aus	AusNZ	96/177 94/94
155	Cyathea	Kermadacensis			8	7	120	BUHNK		Kermadc is, NZ	93/87 92/87
156	Cyathea	Tomentosissima			1	8	84	BU		New Guinea	93/87
157	Cyathea	Tomentosum			20	8	72	BN	New guinea	NGuinea	94/94
158	Cyathea 1	brownii		norfolk is tree fern	60	8	200	BTNEK	NZ, Aus	Norfolk is	96/87 94/94
159	Cyathea 1	cooperi	blue form	Australian, Lacy tree fern	15	8	200	BWSK		AusNZ	96/87
160	Cyathea 1	cooperi	Brentwood	Australian, Lacy tree fern	20	8	200	BWS		Aus	96/177 92/87
161	Cyathea 1	cunningham		slender tree fern	60	8	120	BZNK		AusNZ	92/55
162	Cyathea 1	smithii			20	8	200	BTNK	Auktand	NZ	95/9 92/55
163	Cyathea 2	cooperi	Coastal form	Australian, Lacy tree fern	20	8	200	BWTK	NZ, Nambor Aus	AusNZ	96/177
164	Cyathea 2	Woolfsiana			20	8	120	BUZNK		Aus, NZ	96/87
165	Cyclosorus	Interruptus			20	8	48	KWEU		S&EasiaAus	95/106
166	Cyrtomium	caryotideum		Dwarf holly fern	10	6	24	ZNTKE		India, Easia, Hawai	94/156
167	Cyrtomium	falcatum		Japanese Holly fern	50	6	24	RTNEK	Azores	E&Sasia	95/9,157
168	Cyrtomium	falcatum	Crested	Crested Japanese Holly fern	17	6	24	RTNEK		E&Sasia	95/163
169	Cyrtomium	falcatum	Rochfordianum	Japanese Holly Fern	40	6	20	RSNEK		Jp, ChKor	93/36 92/7,97
170	Cyrtomium	fortunei			50	5	24	ZNTKE	Wakayama, Jp.	JpChKor	96/156,164
171	Cyrtomium	fortunei	intermedium		15	5	16	ZNTKO		JpChKor	94/135 93/43
172	Cyrtomium	Lonchitodes			3	6	12	EK		China	96/11 95/150
173	Cystopteris	alpina	Regia		5	5	12	SNA	Denmark	Eur	95/150 93/12
174	Cystopteris	dickieana		bladder fern	25	5	10	INTAVR		EurNAm	94/12,45,97
175	Cystopteris	fragilis		BrittleBladderFern, Fragile fern	50	4	12	ZNTVKE	Scotland	Cosmo	96/164,24 95/9
176	Cystopteris	fragilis	Fine Form	BrittleBladderFern, Fragile fern	9	2	12	EZNTVK	Germ., eagle crk.	Cosmo	94/24
177	Cystopteris	fragilis	much divided type	BrittleBladderFern, Fragile fern	3	2	12	EZNTVK	Germ Alps 1300 m	EurNAm	95/12
178	Cystopteris	protusa		Southern Bladderfrn, Woodland	5	5	16	ITEGK		E US	96/174,156,8
179	Cystopteris	sudetica			16	6	10	GK		Eur, Easia	94/12,45 93/9
180	Cystopteris 1	montana		mountain bladder fern	8	2	12	ANTR		Cosmo	95/12

HFF	GENUS	SPECIES	CVR	COM. NAME	PK	Z	SIZE	GRO	COLL.SITE	ORIG	DONOR	
181	Cystopteris	2	Tennesseeensis	Tennessee bladder fern	4	5	18	RAEK		SeUs	96/8	
182	Cystopteris	3	fragilis	BrittleBladderFern,Fragile fern	5	2	16	ZNTEK		Cosmo.	94/45	
183	Davallia		Griffithiana	Silver Haresfoot frn	7	8	20	EG		Easia	95/160	
184	Davallia		species		2	8			Taiwan	taiwan	94/12	
185	Deparia		japonica		6	8	10	NEK		IndiaNZ,Jp	95/27 93/26	
186	Deparia		petersonii		20	8	22			Georgia		
187	Dicksonia	\$\$\$	antarctica	SoftTreefrn,Tasmanian Treefer	30	8	120	BUNK	Tasm Aus	AusTasmania	95/9,151	
188	Dicksonia	\$\$\$ 1	fibrosa	RoughTreefrn,WhekiPonga	10	7	120	BEONU	Nt Prk NZ,Auklnd	NZ	95/9 94/25	
189	Dicksonia	1	squarrosa	Wheki,Harsh-leaved,RoughTr	30	8	120	BTNQK	Auckland	NZ	92/55,105,114	
190	Dicksonia	1	youngiae		25	8	120	BNT		Aus	92/9,87,106,11	
191	Diphasiastrum	34	Complanatum	Northern running pine	2	2	8			N NAm	94/9	
192	Diplazium		Assimile		20	8	60	KWS	SydneyAus	Aus	95/106	
193	Diplazium		Mettenianum	tenuifolium	6	8	24	KV	Jap	Jap	95/88	
194	Diplazium		pycnocarpon	Narrow,LeafedGladeFrn,GladeF	10	3	32	WS		E. N.A.	94/8 93/9	
195	Diplazium	1 3	chinense		1	8	24			Easia	93/43	
196	Diplazium	2	Plantaginifolium		20	8				Venez.	96/11	
197	Doodia		Aspera	Prickly rasp fern	15	6	15	UNG	SE Aus.	Aus,NZ,Nor is	95/9,157 94/94	
198	Doodia		media	Common Rasp Fern	20	7	10	TWNZR	E Aus	AusNZ,Nrfolk Island	95/9,170	
199	Doodia		media	Common Rasp Fern	1	8	10	TWNZR		NZAusNewCaled	84/1,135,10	
200	Doodia		media	Common Rasp Fern	20	7	10	TWNZR	E Aus	AusNZ,Nrfolk Island	94/94 93/1,109	
201	Dryopteris		abbreviata		8	5					94/45	
202	Dryopteris		aemula	Hay-scented Woodfern	2	6	20	SNKEH		Eur		
203	Dryopteris		affinis	GoldenScaledMalefrn,scaly	10	4	48	SNTKE		Eur SWAsia	95/12,2	
204	Dryopteris		affinis	GoldenScaledMalefrn,scaly	12	4	48	SNTKE		Eur SWAsia	96/45,153 95/9	
205	Dryopteris		affinis	borneri	scaly male fern, golden scaled	20	4	48	SNK		Eur SWAsia	96/45 95/135
206	Dryopteris		affinis	borneri,Pseudodisjuncta	20	4		SNTKE	Switz	Eur	96/45	
207	Dryopteris		affinis	borneri robusta	scaly male fern, golden scaled	20	4	48	SNK		Eur SWAsia	96/45 94/135
208	Dryopteris		affinis	cambrensis	crisped golden scaled male	20	4	36	SNVTKE		Eur SWAsia	96/45,153
209	Dryopteris		affinis	Coriacea	male fern	4	4	24	SNTK		Iran	96/45
210	Dryopteris		affinis	Crispa	crisped golden scaled male	4	4	48	SNTKE		Eur SWAsia	94/20
211	Dryopteris		affinis	Crispa gracilis	crisped dwarf golden scaled	1	4	16	SNTKE		Eur SWAsia	93/36
212	Dryopteris		affinis	Crispa stableri	NarrowCrsdpdGoldenScaled	5	4	48	SNTKE		Eur SWAsia,Eng	94/25 93/36
213	Dryopteris		affinis	Cristata "The King"	TheKingoffMalefrns,scaly male	3	4	48	SNTKE	Victoria Aus	Eur SWAsia,Aus	94/45,97
214	Dryopteris		affinis	diploid indef?	scaly male fern, golden scaled	4	4	48	SNTKE	SWITZ	Eur SWAsia	96/45
215	Dryopteris		affinis	disjuncta	scaly male fern, golden scaled	6	4	48	SNTKE		Eur SWAsia	96/45 92/9,26
216	Dryopteris		affinis	Persica	scaly male fern, golden scaled	30	4	48	SNTKE		Eur SWAsia	96/45 92/26
217	Dryopteris		affinis	Pinderi	scaly male fern, golden scaled	4	4	48	SNTK		Eur SWAsia	94/150
218	Dryopteris		affinis	Polydactyla Dadds	dadds long fingrd golden	12	4	48	SNTKE		Eur SWAsia	96/153 93/125
219	Dryopteris		affinis	pseudodisjuncta	scaly male fern, golden scaled	5	4	48	SNTKE		Eur SWAsia	92/9
220	Dryopteris		affinis	punctata	scaly male fern, golden scaled	4	4	48	SNTKE	SWITZ	Eur SWAsia	96/45 92/9,26
221	Dryopteris		affinis	robusta	scaly male fern, golden scaled	8	4	48	SNTKE		Eur SWAsia	93/100 92/9
222	Dryopteris		affinis	stillupensis	scaly male fern, golden scaled	4	4	48	SNTKE		Eur SWAsia	
223	Dryopteris		affinis	The King	scaly male fern, golden scaled	6	4	48	SNTKE		Eur SWAsia	94/141
224	Dryopteris		arguta	MarginalWoodfern,CoastalWo	10	8	18	DTKEO		W. N.A.	95/36 94/97	
225	Dryopteris		atrata	shaggy shield fern	30	6	18	NTK		N Hem	95/2 94/9,156	
226	Dryopteris		Barnsii		8	5	24		Me	eUS	95/156	
227	Dryopteris		bissetiana	BeadedWoodfern	20	5	24	SZKEN		Jp	96/10	
228	Dryopteris		blanfordii		20	3	36	K		N. Hem	96/45 95/12	
229	Dryopteris		Borneri	cristata	Crested Scaly Male fern	2	4	48	SN		Eur,SWAsia	94/9
230	Dryopteris		Borneri	pinderi	Scaly male fern	2	4	48			Eur,SWAsia	94/9
231	Dryopteris		cambrensis		7	6			CumbriaEng	Eng	92/24,26	
232	Dryopteris		carthusiana	SpinuloseWoodfrn.	10	2	30	TZWKE		Europe, N Am	96/45 94/9	
233	Dryopteris		caucasica		20	5	34			Caucasian mt	96/45 95/12	
234	Dryopteris		championii	Champion'sWoodfrn	25	5	24	OKNT		Easia	94/10 93/7	
235	Dryopteris		clintoniana	Clintons woodfern	25	3	40	WSKE		E NA	95/141,5 92/26	
236	Dryopteris		contorta	notho complexa	8	8			LecrterdumEng	Eng	93/24	
237	Dryopteris		corleyi		19	8			NSpain	N. Spain	94/104	
238	Dryopteris		crassirhizoma	Thick-stemmedWoodfrn	90	5	36	TVKE	Japan/Fiji,mtNan,Jp	Ko,Ch,Jp	94/45 93/9,34	
239	Dryopteris		crassirhizoma	nakai	Thick-stemmedWoodfrn	10	5	36	TVK	Japan	Japan	
240	Dryopteris		cristata	CrestedShieldfern,NarrowSw	60	3	36	ZWSKE	N.H.,Mich	N. HEM	95/141,108,2,1	
241	Dryopteris		cycadina	ShaggyShieldfrn,Blackwoodfr	40	5	30	NUKE		N Hem	94/45,97 93/3	
242	Dryopteris		cystolepidota		15	7	10	NSK		JapCh	94/38	
243	Dryopteris		dickinsii		15	7	24			Ch,Jp	95/12 93/9,45	
244	Dryopteris		dickinsii	incisa		2	8	24		ChJp	94/45	
245	Dryopteris		dilatata	BroadBucklerfrn,BroadWoodfr	25	4	40	WTOSK	Wales,Germ	NHem,GreenInd	95/12,2	
246	Dryopteris		dilatata	Crispa Whiteside	crisped broad buckler fern	26	4	36	WTOSK		N Hem	95/135,36
247	Dryopteris		dilatata	Grandiceps	BroadBucklerfrn,BroadWoodfr	10	4	36	WTOSK		N Hem	
248	Dryopteris		dilatata	Jimmy Dyce	JimmyDycesUprightBroadBuc	47	4	20	WTOSK		GBrit.	95/146 94/36
249	Dryopteris		dilatata	Lepodota cristata	LacyCrestedBroadBuckler	15	4	18	WTOSK		N Hem	94/25 92/97
250	Dryopteris		dilatata	Recurvata	RecurvedBroadBucklerfrn,Bro	10	4	36	WTOSK		N Hem	93/25,113
251	Dryopteris		erythrosora	Autumn fern	35	5	28	TNKO		ChJpKr	96/18	
252	Dryopteris		erythrosora	Prolifica	Prolific autumn fern	8	5	16	TNKO		ChJpKr	96/156,20
253	Dryopteris		erythrosora	white sori form	autumn fern	5	5	16	TNKO		ChJpKr	92/25
254	Dryopteris		expansa	ArchingWoodfernSpreadingw	30	3	30	RTNE	Wash	NW N.Am	96/20,34 95/9	
255	Dryopteris		Expansa ?	small asian		8	5	k		Asia	95/12	
256	Dryopteris		filix-mas	Male Fern	90	3	60	ZSNVE	Mich	N Hem	95/8,27,5	
257	Dryopteris		filix-mas	Barnesii	barnes narrow Male Frn	10	3	36	ZSNVE		N Hem	96/153,156
258	Dryopteris		filix-mas	CrispaCristata	Male Fern	60	3	48	ZSNVE		N Hem	95/2
259	Dryopteris		filix-mas	Cristata	Male Fern	60	3	48	ZSNVE		N Hem	93/120,131
260	Dryopteris		filix-mas	cristata martindale	Male fern	10	4	48	ZSNOK		N Hem	96/153 95/141
261	Dryopteris		filix-mas	CristataFilmy type	Male Fern	20	3	60	ZSNV		N Hem	93
262	Dryopteris		filix-mas	Grandiceps	grandicapital crested Male	15	3	36	ZSNVE		N Hem	96/153 94/9,25
263	Dryopteris		filix-mas	linearis	Slender Male frn	17	4	36	ZSNOK		N Hem	95/141 94/12
264	Dryopteris		Filix-mas	Linearis Plumosa		1	4	60	ZSNOK		N Hem	94/12,141
265	Dryopteris		filix-mas	Linearis polydactyla	Slender crested Male Fern	30	3	48	ZSNVE		N Hem	95/2,157
266	Dryopteris		filix-mas	Lux-lunae polydactyla	Male fern	10	4	60	ZSNOK		N Hem	95/159
267	Dryopteris		Filix-mas	Martindale	male fern	7	4	48	ZSNOK		N Hem	94/141
268	Dryopteris		filix-mas	polydactyla	Male fern	5	4	48	ZSNOK		N Hem	94/141
269	Dryopteris		filix-mas	Polydactyla Dadds	Male fern	7	4	48	ZSNOK		N Hem	95/135
270	Dryopteris		filix-mas	small erect type	Male Fern	14	3	48	ZSNVE	Germ	N Hem	94/12 93/12



HFF	GENUS	SPECIES	CVR	COM. NAME	PK	Z	SIZE	GRO	COLL.SITE	ORIG	DONOR
271	Dryopteris	filix-mas	Straberi ?	Male Fern	60	3	48	ZSNVE		N Hem	95/2
272	Dryopteris	filix-mas	sublinearis	Male fern	11	4	48	ZSNOK		N.Hem	94/141
273	Dryopteris	filix-mas	undulata robusta	Male Fern	25	3	60	ZSNVE	Me	N Hem	95/108 94/97
274	Dryopteris	fructuosa			60	8	48	NSK		Taiwindia	93/43 92/26,43
275	Dryopteris	goldiana		Goldie's fern, Giant Woodfm	15	3	48	TNVKE	Mich	N Am	96/156.8
276	Dryopteris	goldiana hyb. ?	x D. clintonia ?	Goldie's Fern	7	3	48	SN	CT	CT	94/39
277	Dryopteris	Gymnosora			3	8	12			Japan	94/36
278	Dryopteris	hangchoensis			25	8				Japan	92/43
279	Dryopteris	hondoensis			10	4	24	EKTN		Jap	92/9
280	Dryopteris	indusiata ?			4	8	72			Jp Taiw	93/45
281	Dryopteris	intermedia		Evergreen Woodfm, Glandular	10	3	34	ZSNOE	MA	E N America	95/8 94/9,12
282	Dryopteris	juxtaposita			6	7				India	94/45 93/9
283	Dryopteris	Khasiana			6	8					95/2
284	Dryopteris	lacera			50	5	24	NTKE	tokyo, Wakayama, Jp.	EasiaIndia	96/157 95/12
285	Dryopteris	Lepidota		Sunset fm	10	5	20	ZNEK		NindiaCh Eur	94/45
286	Dryopteris	ludoviciana	x Hybrid	Southn Woodfm, Southn Shield	15	6	46	ASEWK	NE NC.	SE US	96/156 95/9
287	Dryopteris	marginalis		Leather Woodfm, Marginal	50	2	25	ESNOK	Pa. Me	NE N. Am	96/174 95/108
288	Dryopteris	nigropaleacea			4	7					93/9
289	Dryopteris	oreades		Mountain Malefm, Dwarf Malefr	30	4	20	NSVKE	ElbrusCaucusus	Eur	95/12
290	Dryopteris	pallida			25	8				Eurasia	93/12
291	Dryopteris	pallida	oallida		25	8			Corfu, Greece	Eurasia	95/135 92/26
292	Dryopteris	pallida	raddeana		8	8				Eurasia	94/45
293	Dryopteris	polylepis		Scaly Woodfm	29	6	24	EKNT		Jap	94/18, 97 93/43
294	Dryopteris	pseudo-filix mas		Mexican Malefm, Mex. Woodfm	15	5	46	INSKE		Mex Calif	95/9 94/10
295	Dryopteris	pseudo-mas		see d. affins	6	4	24	NSOK		Eur	95/2 94/148
296	Dryopteris	pseudo-mas	Cristata	see d. affins	10	4	24	NSOK		Eur	93/38
297	Dryopteris	pseudo-mas	The King ?	see d. affins	6	4	24	NSOK			95/2 94/148
298	Dryopteris	pycnopteroides			50	6	24	KENTO		SikkimJap	96/45 95/9
299	Dryopteris	ramosa			1	6				Phillip	93/9
300	Dryopteris	sichotensis			15	5	48	EKN		Easia	96/146
301	Dryopteris	sieboldii		Siebold's Woodfm	8	6	24	ZSENK		Easia	96/156, 176
302	Dryopteris	sieboldii	Cvenata		5	6	20	ZSNKE		Easia	92/111
303	Dryopteris	sieboldii	Incisum	Siebold's Woodfm	6	6	24	ZSNKO		Easia	96/10
304	Dryopteris	sp.	Japan		4	8				Japan	93/7
305	Dryopteris	spinulosa	americana	Toothed wood fern	15	4	24	ZN	Deeplk	N.A. Jp	93/3, 9, 97
306	Dryopteris	stewartii			40	7	48	K	Denmark		96/45 95/12
307	Dryopteris	sublacera			20	7	20				95/36 94/24, 25
308	Dryopteris	submontana		Rigid Bucklerfm, Limestone Wo	15	6	20	EANK	Huttnroof Camb Eng	Eur. N. Af	94/104
309	Dryopteris	varia		see d. bisetiana	1	6	24	ZSNK		Sasia, Philipin	94/45
310	Dryopteris	varia	setosa	see d. bisetiana	10	6	24	ZSNK		Sasia, Philipin	92/111
311	Dryopteris	villarii			20	5			PiriuBausko Bulq	Eur	95/12 94/45
312	Dryopteris	Villarii	Submontana		4	5			PiriuBausko Bulq	Eur	95/61
313	Dryopteris	wallichiana		Wallich's wood fern	60	5	40	SNKB		Pantropic	95/2 4/45 93/97
314	Dryopteris	x bootii		Boots Woodfern	3	3	30	WTKE	Wisc	NA	93/24
315	Dryopteris	X complexa	complexa	hybrid robust male fm	4	4	36	ETNK		Europe	96/45
316	Dryopteris	X complexa	critica	hybrid robust male fm	12	4	36	ETVNK	Germ	Europe	94/45
317	Dryopteris	x tavelii			43	5		S			95/12 92/9
318	Dryopteris 1	amurensis		Amur woodfern	15	4	24	SWKE		Jp	94/12
319	Dryopteris 1	ardechensis			14	8		SN	Ardeche, Frnce	France	94/45, 24 93/9
320	Dryopteris 1	celsa		Log Fern	60	4	40	ZTWOK	NwarkNJ	E US	96/156
321	Dryopteris 1	remota			25	4	36	IKNTE		Eur	94/45, 153, 97
322	Dryopteris 1	x remota			12	4	36	EKNT		Eurasia	96/10 95/41
323	Dryopteris 2	affinis	azoricum	Golden Scaled Malefm, scaly	12	4	48	ISNTKE		Azores	96/45
324	Dryopteris 2	filix-mas	subcristata	Male fern	5	4	60	ZSNOK		N.Hem	96/153
325	Dryopteris 2	Ramosa x Stewartii			4	6				Pakisatn	96/45
326	Dryopteris 3	filix-mas	Cristata Jackson	Male Fern	3	3	48	ZESNO		N Hem	94/45
327	Dryopteris 3	Namegatae			5	7				Jap	94/45
328	Equisetum	Arvense			2	3	18	KWGU		NAm	95/9
329	Equisetum \$	helmateia		Giant Horsetail	10	7	70	QGWUV		NW N.A.	95/9, 162
330	Equisetum \$ 1	palustre		marsh horsetail	7	2	18	WU		cosmo	95/9
331	Equisetum \$ 1	Ramosissimum			10	7	60	WUK		Eur, SE US	95/9
332	Equisetum \$\$\$ 2	Scirpoides		CorkScrewRushDwarfScounin	10	4	10	KWOEG	Mich	NHem	95/153
333	Equisetum \$\$\$ 2	Sp.	Micro???		10	4	10	FWOEG	Mich	Mich???	95/153
334	Grammitis \$\$\$	billardieri			10	7	5	WTYJ		Pantrop	95/53
335	Gymnocarpium	dryopteris		Oak Fern	70	2	12	ERSGV	B.C.	NHem	96/164
336	Gymnocarpium	dryopteris	Plumosa	Plumosa Oak Fern	20	2	12	RSRV	Me	NHem	95/108, 1, 12
337	Gymnocarpium	oyamense			10	8	12	GENTK		EAsia	
338	Gymnocarpium 1	robertianum		LimestoneOakfmRobert'sOakde	40	2	16	ASEGN		NHem	95/9
339	Hemionitis	Arifolia		Heart fern	8	8	6	KUA		S&SEasiaEindies	96/156
340	Hypolepis	muelleri			10	8	80	GWUK	Vict Aus	AusTasm	93/53
341	Hypolepis	punctata		Dowmy Ground fern	3	8	48	GUNEK		Asia Aus, NZ	
342	Hypolepis	Repens		Bramble Fern	5	7	80	GS		FlaC&SamWindie	95/156
343	Lastreopsis	acuminata		Shiny Shield fm	8	8	30	ENSJ		NZ, AusTasm	95/53
344	Lastreopsis 3	nephrodioides			1	8	12	SN		MalayLdtHowels	95/53
345	Lunathyrium	japonicum		Japanese lady fern	10	6	22	JEANTK		S&SE&E asia	94/45 93/36
346	Lunathyrium	Unifurcatum			12	8	24	KO	Jap	Jap	95/88
347	Lycopodium	Annotinum		running pine	5	3	3	QLTZN		Cosmo	95/9
348	Lycopodium	tristachyum		blue ground cedar	3	3	6	QLTNZK		NE N. Am	93/9
349	Lycopodium \$\$\$ 2	Obscurum		Princess Pine, Flat Branched Cl	10	3	10	QZSWH	Mich	neNam	95/153
350	Lycopodium \$\$\$ 2	Selago		Northern Fir Moss Fir Clubmoss	10	3	6	QZUWH	Mich	EindiesNAMNZ	95/153
351	Lycopodium	japonicum		Japanese climbing fm	20	7	72	CNUK	SW Miss, TX	S&SEasiaAus	95/52, 163, 154
352	Marsilea \$\$\$ 2	Quadrifolia		WaterCloverWater Shamrk	10	4	4	FEGU	Mich	NHem	95/153
353	Matteuccia	orientalis		Oriental ostrich fm	40	5	30	JEZ		far east	
354	Matteuccia \$	struthiopteris		Ostrich Fern Shuttlecockfm	60	2	60	ZWSEV		N. Hem	96/175
355	Matteuccia \$\$\$	struthiopteris	Pennsylvania	Ostrich Fern	40	2	60	ZWSEO	Ma	E. US	95/8 94/120
356	Nephrolepis	cordifolia		fishbone fern, Sword fm	8	8	24	URJDE		Pantropic	95/9, 151
357	Nephrolepis	cordifolia x Hyb	Paul Cambell	fishbone fern	5	8	24	URJDE		Pantropic	95/157
358	Nephrolepis	Obliterata	Kimberly Queens		20	7	36		NW Aus	Aus	94/94
359	Notholaena	sinuata		cloak fern	12	7	24	QUDA		SwUs, C&S am	92/104
360	Oleandra	species			10	8				China	95/11



HFF	GENUS	SPECIES	CVR	COM. NAME	PK	Z	SIZE	GRO	COLL.SITE	ORIG	DONOR
361	Oleandra	species			2	8				KwangtungChina	95/63
362	Onoclea	sensibilis		Sensitive Fern.	60	2	24	WUGZE	Va	NHemAsia	96/161,175
363	Oreopteris (Thelypteris)	limbosperma		mountain fern	10	4	40	ZSNK	Scotland	Eur N.A.	94/45
364	Osmunda \$\$\$	cinnamomea		Cinnamon Fern	10	3	60	WZVEK		Cosmo	96/175,176
365	Osmunda \$\$\$	claytoniana		Interrupted Fern	5	2	60	ZWSVK	Me	Cosmo	96/175 95/8
366	Osmunda \$\$\$	Japonica		RoyalFern, Flowering Fern	20	6	32	EYZWS		E&SAsia, Philipp.	95/110
367	Osmunda \$\$\$	regalis		RoyalFern, Flowering Fern	20	3	90	ZWSOK		Cosmo	96/175
368	Osmunda \$\$\$	regalis	Crispa	Crested royal fern	10	3	72	ZWSVK		Cosmo	95/25 94/25
369	Osmunda \$\$\$	regalis	Cristata	crested royal fern	10	3	72	ZWSVK		Cosmo	94/25
370	Osmunda \$\$\$	regalis	gracilis	RoyalFern, Flowering Fern	1	4	48	ZWSVK		N. Hem	94/5
371	Osmunda \$\$\$	regalis	Japonica (Dimorphic)	RoyalFern, Flowering Fern	1	4	48	ZWSVK		N. Hem	94/5
372	Osmunda \$\$\$	regalis	purpurescens	purple stemmed royal fm	10	3	72	ZWSVK		Cosmo	96/176
373	Osmunda \$\$\$	Regalis	regalis	RoyalFern, Flowering Fern	10	3	90	ZWSVK		Cosmo	94/25
374	Osmunda \$\$\$	regalis	regalis Purpurascens	Purple Royal Fern, Flowering Fe	10	3	90	ZWSVK		Cosmo	95/110 94/25
375	Osmunda \$\$\$	regalis	spectabilis	RoyalFern, Flowering Fern	10	3	90	ZWSVK		Cosmo	95/25 93/9,150
376	Osmunda \$\$\$	regalis	Undulatum	RoyalFern, Flowering Fern	1	4	48	ZWSVK		N. Hem	94/5
377	Osmunda \$ 2	regalis	Dwarf	RoyalFern, Flowering Fern	20	3	40	ZWSOK		Cosmo	96/176
378	Pellaea	landromedifolia		Coffee Fern	15	8	20	ZUDK		Calif	96/110
379	Pellaea	calomelanos		hard fern	8	8	10	UDAK	Spansh orig	WHem, Eur	94/104
380	Pellaea	Intramarginalis			20	8	30			MexCAm	95/106,165
381	Pellaea	nitidula			15	8	10			ChHawii	94/104
382	Pellaea	rotundifolia		Button fern, Round-leaved fm	13	7	6	DTZK		NZ	95/9,1,10,166,1
383	Pentagramma	triangularis		goldback fern	10	6	10	UDRK		N.A.	95/146,170
384	Phanerophlebia	falcata			4	7					
385	Phanerophlebia	fortunei			5	7					
386	Phlegopteris	connectilis		Beech fern	40	5	16	SNGVK	Wisc, Scotland	N. Hem	96/8 93/129
387	Phyllitis	hemionitis			1	8	10			Spn, Canryls	92/45
388	Phyllitis	scolopendrium			50	4	24	ARNSK	Ma	N. Hem	96/45,10,174
389	Phyllitis	scolopendrium	Angustifolia	Harts tongue fern	6	4	24	ARNSK		N. Hem	95/2,150 94/9
390	Phyllitis	scolopendrium	Crenata		1	4	24	ARNSK		N. Hem	95/150
391	Phyllitis	scolopendrium	Crispum Muricatum		3	4	24	ARNSK		N. Hem	95/2
392	Phyllitis	scolopendrium	Digitatum		3	4	24	ARNSK		N. Hem	95/2
393	Phyllitis	scolopendrium	marginata	Harts tongue fern	2	4	24	ARNSO		N. Hem	94/9
394	Phyllitis	scolopendrium	Muricatum		3	4	24	ARNSK		N. Hem	95/2
395	Phyllitis	scolopendrium	Rhodesian crested		10	4	24	ARNSK		N. Hem	95/157
396	Phyllitis	scolopendrium	scolopendrium	Hart's-tongue Fern European	3	4	24	ARNSK		N. Hem	95/9 94/154
397	Phyllitis	scolopendrium	undulata	Undulating Harts tongue fern	1	4	20	ARENS		N. Hem	94/9
398	Phyllitis	scolopendrium	wild-Italy		6	4	24	ARNSK		N. Hem	94/9
399	Phymatodes	diversifolium		Kangaroofern	5	8	20	JGH		SAMAusNZ	95/9
400	Platycerium	bifurcatum		Elk horn fern	15	8	24	JHTE		AusEIndiesIndia	95/9
401	Polypodium	Australe	Cristatum old form	southern polypody	8	8	18			Eur	92/41
402	Polypodium	australe	Dentatum	southern polypody	5	6	18	JNT		Eur	92/41
403	Polypodium	australe	omnicaerum oxford	southern polypody	2	6	18	JNT		England	92/41
404	Polypodium	australe	Semilacerum Falcatum	southern polypody	6	6	18	JNT		Eur	92/41
405	Polypodium	australe Semilacerum	falcatum O'Kelly	southern polypody	8	6	18	JNT		England	92/41
406	Polypodium	australe Semilacerum	robustum	southern polypody	5	6	18	JNT		England	92/41
407	Polypodium	cambricum	cambricum	Welsh Polypody, Southern Poly	8	6	10	TNK		sw Calif	95/9
408	Polypodium	cambricum	serrulatum	welsh polypody	5	3	8	TN		sw Calif	95/9 94/154
409	Polypodium	ellipticum			1	7	30	GNSK		E asia	92/9
410	Polypodium	formosanum		GreenSerpentfm, Caterpillarfm	10	8	12	HJNT		TaiwCh Japan,	96/110 95/164
411	Polypodium	ghycorrhiza		licorice fern	8	5	20	JSRHN		NW N.Am	96/10 93/97
412	Polypodium	interiectum		see microsorum punctatum	22	6	20	UWRRAK		Eur	95/9
413	Polypodium	interiectum	Glomertum Mullins		5	6	20	UWRRAK		Eur	92/41
414	Polypodium	scoleri		leather polypody	10	7	14	TNJR	Wash.	N.Am	95/10,27,1
415	Polypodium	virginianum		Am. Wallfern, Rockpolypody, R	10	2	14	RTON	Wisc, Me	N.Am	95/8 94/9
416	Polypodium	vulgare		Common Polypody	10	5	12	NTJK	Switz, Me	N. Hem	95/9,166 93/38
417	Polypodium	vulgare	prionodes	common polypody	1	4	14	NTJK		Cosmo	94/9
418	Polypodium 1	amorphum		Irregular polypod, Mountain Pol	20	6	12	R	Oreg, ColumRvr	Pacific NW	94/97
419	Polypodium 3	australe	Grandiceps Forster	southern polypody	2	6	18	JNT		Eur	92/41
420	Polypodium 3	californicum		Calif. Polypody	2	8	24	RNT		California	94/1
421	Polystichopsis	mutica			3	8				Jap	94/45
422	Polystichum	acrostichoides		Christmas Fern	40	3	28	SNOK	Me, Mich, Wa, Va, Wisc	N.Am	96/153,174,178
423	Polystichum	aculeatum		Hard Shield Fern	30	4	30	EASRG	Czech	Eur, N India	95/2,9,160
424	Polystichum	aculeatum	Bornim	Hard Shield Fern	1	4	24	ASRNG		Eur, N India	94/45,104,97
425	Polystichum	aculeatum	Nrw, split form	Hard Shield Fern	10	4	24	ASRNG		Eur, N India	
426	Polystichum	australiense			10	8			Aus	Aus	95/106
427	Polystichum	braunii		Braun's holly fm	60	3	28	SNOKE	Wisc, Mich	N. Hem	96/45,153
428	Polystichum	californicum		Cal. Hollyfern Cal. Swordfern	22	7	30	RNT	N. Calif, SonomaC	California	94/4,1
429	Polystichum	falcinellum			20	7	24		Is Of Madiera	S. EurMadg	93/12 92/12
430	Polystichum	imbricans		ImbricantSwordfm, DwarfWest	30	3	24	SNK		W NAm	94/97 93/7
431	Polystichum	lemmoni		Shasta Holly fern	20	6	12	TNLK	Wa	W NAm	93/28,132
432	Polystichum	lobatum			30	6	12			Ch	93/9 93/12
433	Polystichum	lonchitis		Northern Holly fern	30	3	18	ASWOK		N. Hem	96/45 95/8
434	Polystichum	makinoi		Makino's holly fern	20	5	24	EKNOT		CH, Jap	96/45 95/2,12
435	Polystichum	mayebarae			5	6	18	TNK		ChJap	94/36 93/38
436	Polystichum	mohriodes		p. lemmoni	30	5	14	R		Ch, W NAm	93/12 92/12
437	Polystichum	munitum		WesternSword Fern	60	5	58	SNOK		W NAm	94/12 93/38
438	Polystichum	Munitum	Twisted Pinna	Sword Fern	20	5	36	SNKO		W NAm	94/25
439	Polystichum	neolobatum		Long-eared holly fern	28	5	24	ENOKS		JpChNep Him	96/45
440	Polystichum	polyblepharum		Tassel fm, Japanese Lace fm, Ja	25	5	24	SZEK	Jap	JpChKor	95/2
441	Polystichum	polyblepharum	Bornim	Tassel fm, Japanese Lace fm, Ja	3	5	24	SZEK	Jap	JpChKor	94/9
442	Polystichum	proliferum		Mother shield fern	15	5	36	NTEK		AusNZ	94/97
443	Polystichum	prolificum			1	8	36			Aus	
444	Polystichum	retroso-paleaceum			30	5	36	SNEKO		JpChKor	94/36,45,38
445	Polystichum	Richardii		Richards Holly fern Black	10	6	24	KN		NZ	95/9
446	Polystichum	rigens		Rigid Holly fm	15	5	24	KNT		JpChKor	93/9,26
447	Polystichum	setiferum		Soft Shield Fern	99	5	40	TNKE	Fr, Switz, Cauc, Wales	Europe	96/24
448	Polystichum	setiferum	Acutlobum	Soft Shield Fern	5	5	40	TNK		Europe	92/45
449	Polystichum	setiferum	Congestum	Soft Shield Fern	15	5	40	TNK		Europe	95/2 94/150
450	Polystichum	setiferum	Cristata Bouchart	Soft Shield Fern	3	5	40	TNK		Europe	93/97

HFF	GENUS	SPECIES	CVR	COM. NAME	PK	Z	SIZE	GRO	COLL.SITE	ORIG	DONOR
451	Polystichum	setiferum	dahlem	soft shield fern	18	5	40	TN		Eur	94/12.45.2
452	Polystichum	setiferum	divisilobum cristatum	Soft Shield Fern	5	6	40	TN		Europe	94/97
453	Polystichum	Setiferum	foliosum	soft shield fern	2	6	36	TN		Eur	94/9
454	Polystichum	setiferum	Grandidens	Soft Shield Fern	1	5	40	TNKE		Europe	95/41
455	Polystichum	setiferum	Herrenhausen	Soft Shield Fern	6	5	40	TNK		Europe	95/2
456	Polystichum	setiferum	Linearis type	Soft Shield Fern	6	5	40	TNK		Europe	
457	Polystichum	setiferum	Perserratum	Soft Shield Fern	5	5	40	TNK		Europe	92/101
458	Polystichum	setiferum	proliferum	Soft shield fern	5	5	40	TN		Eur	95/2 94/9
459	Polystichum	setiferum	proliferumWollastonii	soft shield fern	2	6	40	NT		Eur	94/9
460	Polystichum	setiferum	RotundCristatum	Crested Soft Shield Fern	10	5	40	TNK		Europe	96/10 94/20
461	Polystichum	silvaticum			8	8	18		mtGarret Tasmania	TasmaniaNZ	
462	Polystichum	squarrosum			20	7	18	NTK		EurIndiaHimalaya	94/36 93/97
463	Polystichum	tripteron		Trifid Holly fern	25	5	24	NTE	Wakayama,Jp.	Easia	96/45 95/12
464	Polystichum	tsus-simense		KoreanRockfm,Tsu-simaHilvF	15	6	18	ZSNKE		Ch Jp Kor	96/18.164
465	Polystichum	vestitum		Prickly shield fern	15	6	36	TSKE	NZ	AusNZ	96/36 95/9.169
466	Polystichum	woronowii			4	7				Abkazia	
467	Polystichum	x illyricum			40	5				SEur	96/45 94/97
468	Polystichum 1	aculeatum	Acutilobum	Hard Shield Fern	30	4	30	EASRG	Denmark	Eur, N India	95/150
469	Polystichum 1	andersonii		andersons holly fern	40	6	36	WSRK	Mt	NW N Am	96/10 95/1
470	Polystichum 1	dudleyi		dudley's holly fern	8	6	36	TNK		Calif.	92/36
471	Polystichum 1	setiferum		AlaskaSwordfern,AlaskHollyfe	70	2	48	SNK		NW NAm	94/12 92/7.9.26
472	Polystichum 1.2	x bicknellii			4	6				Rumania	96/45
473	Polystichum 1.2	x luerssenii			4	6				Rumania	96/45
474	Polystichum 1.2	x wirtgenii			4	6				Rumania	96/45
475	Polystichum 2	Transkeiense			8	7		ZNKSG	SAfr	STropics	96/164
476	Polystichum 3	setiferum	Conspiculobum	Soft Shield Fern	3	6	40	TN		Europe	94/45
477	Polystichum 3	setiferum	Conspicupinnulum	Soft Shield Fern	4	6	40	TN		Europe	94/45
478	Polystichum 3	setiferum	divisilobum angustatum	Soft Shield Fern	3	6	40	TN		Europe	94/45
479	Polystichum 3	setiferum	Mrs Hughes	Soft Shield Fern	3	6	40	TN		Europe	94/45
480	Polystichum 3	setiferum	Rotundatum	crested Soft Shield Fern	5	6	40	TN		Europe	95/141 94/45
481	Pteris	cretica		CretanBrake,Ribbonfm	30	8	24	THNEK	Wakay,Jp.:Nitaly	Comso	96/156 95/9
482	Pteris	cretica	Albo lineata	CretanBrake,Ribbonfm	25	8	24	THNEK		Comso	95/9.2.135.160
483	Pteris	cretica	AlboLineataAlexandrae	CretanBrake,Ribbonfm	25	8	24	THNEK		Comso	95/160
484	Pteris	cretica	cretica	CretanBrake,Ribbonfm	2	8	24	THNEK		Comso	95/9
485	Pteris	cretica	Major	CretanBrake,Ribbonfm	4	8	24	THNEK	Wakay,Jp.:Nitaly	E Hem	95/157
486	Pteris	cretica	Mavii	CretanBrake,Ribbonfm	3	8	24	THNEK		E Hem	95/157
487	Pteris	cretica	Rivertoniana	CretanBrake,Ribbonfm	15	8	24	THNEK		Comso	95/11.94/110
488	Pteris	cretica	Rowenii	CretanBrake,Ribbonfm	5	8	24	THNEK		E Hem	95/2
489	Pteris	cretica	wilsonii	CretanBrake,Ribbonfm	2	8	24	THNEK		Comso	95/9
490	Pteris	cretica	Wimsettii	CretanBrake,Ribbonfm	9	8	24	THNEK		Comso	95/9.2.157
491	Pteris	Inconpleta			4	8			Azores	Azores	95/9 94/24
492	Pteris	macilenta		NZ brake	15	8	30	WSNEK	NZ	NZ	95/53.37
493	Pteris	multifida		SpiderBrake, ChineseBrake	8	6	20	NTREA		JapCh	96/156 95/9
494	Pteris	sempinnata			2	8	30			E asia	95/110
495	Pteris	tremula		TremblingBr,AustralianBr,Ten	26	8	60	ETHNK		AusNZ FLJ	95/157.135.170
496	Pteris	vittata		LadderBrk,Chinese Brake	30	8	36	UANEK		E Hem	95/160.9
497	Pyrrosia	polydactyla			20	8	7	UNE		Taiwan	95/63 92/110
498	Pyrrosia 3	lingua		Tongue fn,Jap felt fern	9	6	10	IDUZGJE		E&SE Asia	95/9 94/27
499	Rumohra	adiantiformis		Leatherleaf Fern	6	8	48	SNJ	argnt	Pantropic	95/108.157
500	Salvinia \$\$\$	Natans			10	8	1	EFWHG		Eurasia	95/2
501	Selaginella \$\$\$ 2	Uncinata		RainbowMoss,BlueSelaginell	10	6	2	GOSZ	Mich	China	95/153
502	Selaginella 3	Kraussiana		Krauss's spikemoss	1	6	1/2	KGW		AfAzores	94/143
503	Thelypteris	Acuminatus			5	8			Wakayama,Jp.	Jap.	94/82
504	Thelypteris	decursive-pinnata		WingedBeech,	15	4	24	ENT		EurS&Easia	95/141.154.163
505	Thelypteris	hexagonoptera		BroadBeechFern,SouthernBe	20	4	20	SZNEO	Va,Me	E NAm	93/9.126 92/8
506	Thelypteris	japonica			2	8	14	INTK		Easia	
507	Thelypteris	kunthii		DecidSouthShieldfern,Riverfe	30	7	36	GNRET		SE US	95/27.9 94/156
508	Thelypteris	limbosperma		Lemon-scentedfm,SweetMou	25	4	40	ZRUN		Eur.NAm	95/1.12 92/9
509	Thelypteris	nevadensis		Nevadamarshfern,NevadaWo	20	4	25	TWEK		NW N Am	94/97
510	Thelypteris	noveboracensis		NewYorkFern,Taperingfm	28	4	18	ZTNEG	Va	NAm	95/156.108
511	Thelypteris	palustris		Marsh fern	18	2	30	WZSKG	MA	Eur.NAm	95/9.135.8.108
512	Thelypteris	palustris	palustris	marsh fern	15	4	18	WZGSK	SumtEng	Eur.NAm	92/24
513	Thelypteris	palustris	pubescens	marsh fern	6	4	30	WZGSK		Eur.NAm	92/9
514	Thelypteris	phegopteris		NarrowBeechfern,NorthernBe	25	2	24	SNZOK	JaveBeds Wa	Eur.NAm	96/129.8
515	Thelypteris	simulata		Massachusettsfern,Bogfern	30	4	24	WZT		INE NAm	95/141.93/9
516	Thelypteris	torresiana		Mariana Maiden Fern	20	8	40	AWETK	Ga.	Cosmo	95/156 93/128
517	Thelypteris 1	Dentata		DownyMaiden,BlueStemfm	8	6	20	AHTKN		Pantrop	95/156 94/156
518	Thelypteris 2	Viridifrons			1	5					96/174
519	Thesipteris \$\$\$	Ovata			10	8	16	IGQK		Aus	95/53
520	Todea \$\$\$	barbara		austral king fern	10	8	48	QUNK		AusNZ,S Af	95/53
521	Woodsia	fragilis			30	5	14	TK		CAm	96/45 95/12.61
522	Woodsia	ilvensis		Rusty Woodsia	13	2	6	ERTNZ	Norway	EasiaNAmEur	96/45 95/108
523	Woodsia	intermedia			8	5	6			EAsia	96/45 94/9
524	Woodsia	obtus		Blunt lobed Wood Fern	10	3	14	RTNEA		NAm	96/174 95/156
525	Woodsia	plummerae		Plummer'sCliff.fern,Plummer	8	7	14	RNT		MexSW US	94/97
526	Woodsia	polystichoides		Holly-fern Woodsia	4	4	10	RUZEN		EAsia	96/45 94/9 92/7
527	Woodsia 2	glabella	glabella		4	3				Finland	96/45
528	Woodsia 2	sp.	fancy fronds		10	5	5"	K			96/153
529	Woodwardia	fimbriata		Giant chain fern	40	7	80	TWUEK	Ca	CalifMex	83/7.25.97
530	Woodwardia	radicans		EuropeanChain fern	10	7	60	NUK		Eurasia	94/9.135
531	Woodwardia	virginica		Virginia Chain Fern	20	3	24	WZUGO		E NAm	96/180



## Donor's List

DN#	FIRST	LAST
1	Brian	Aikins
4	Wendy	Born*
6	Anna Maria	Davis
8	Leslie	Duthie
10	Sue&	Entz
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16	Neil	Hall
18	Kenneth	Hanover
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103	Richard	Pillar
106	Barry	White
107	Beverly	Edney
109	Phyllis P.	Bates
110	Bob	Halley
112		AFS/NYBG
114	J. C.	Punter
116	Rufina	Osorio
117	Dr. Donald	Farrar
119	Elva C.	Link
122	Mrs Hiroko	Sasashi
124	Michael	Garrett
126	Jason	Ney
128	James A.	Rollins
130	Loyd & Vera	Barton
134	Sandra	Constantino
136	D.J.	Batten
139	Jack	Schieber
142	Jesse	Perry
144	Jean	Lundberg
147	Dr. Howard	Hinde
149	Judy	Quattrochi
150	Jens Henrik	Nielson
151	Marlena	Fairbourne
153	Owen	Hammerberg
155	Brian E.	Nash
157	Stephen J.	Coppins
159	Nancy	Sherlock
161	Dean	Sliger
163	Ann	Herrington
165	Harold	Frank
167	Louise	Parsons
169	Lyle	Winkel
171	Mitch	Day
173	Peter	Podaras
175	Fran	
177	Shane	Barry
179	Janet	Yang

3	Wayne	Baxter
5	Mrs Alice J.	Burkman
7	Sylvia & Phil	Duryee
9	Patrick	Dwyer
11	Iris	Gaddis
13	Chris	Goudy
15	Greg	Haines
17	Marguerite	Hankerson
19	Leslie	Hatfield
21	JR	Horrocks
23	Guy	Huntley
26	Harold Dr.	Kasper
28	Mareen	Krukeberg
30	Donald	Leake
32	Lynn	Makela
34	Dr. John T.	Mickel
35	Mary	Muller
37	Barbara S.	Parris
39	Kan	Pfeiffer
41	Martin	Rickard
43	Prof.	Saiki
45	PhDr. Zdenek	Seibert
49	William	Thomson
52	Samuel	Tumey
54	Dr. Cor	Van de Moesdijk
56	Suzette	Visentin
58	Bruce	Wakeman
60	Reginald	Kaye
62	John	Adkins
64	Diane & Ken	Atterbury
66	Dorothy	Byer
68	Eileen	Clause
70	Lothar	Denkewitz
72	Joachim	Ehlers
74	Robert	Gamlin
76	Jean	Graber
78	Edward	Hallman
81	Yoshio	Kato
83	John	Knouse
85	Dorothy	Lamb
86	Dr. David B.	Lellingier
87	John & Judy	Marley
89	Pamela	Moscetti
91	Dr. Elizabeth	Sheffield
94	Val	Sontor
96	Judith	Sullivan
98	Christian	Wingard
100	Marge	Baird
102	E. MD	Hirsch
105	Bryan J.	Laughland
106	Barry	White
108	Catherine	Guiles
110	Linda and	Halley San
111		HFF
113	Naud	Burnett
115	Gretchen	Gould
117	Joan	Feely
118	Chanin	Thorut
120	Dr Alf	Birkrem
123	Betsy	Feuerstein
125		HFF Lakewold
127	Ted	Evers
129	MICHAEL	HEIM
131	Robert	Muller
135	Wim	Tavernier
138	Cynthia	Farden
140	Alan	Smith
143	Wally	Reed Jr
146	sue	mandeville
148	Mary Ellen	Tonsing
149	Judy	Quattrochi
150	Jens	Nielson
152	Mogens	Huge
153	Owen	Hammerberg
156	Peggy	McGill
158	Claire	Minne
160	Stanislava	Hoskova
162	Daniel	Yansura
164	Joost	Veldkamp
166	Ivan	Shukster
168	Gerald	Kranz
170	Frank	Damgaard
172	Frank	Pepi
174	Carolyn	Stamm
176	Joan	Gottlieb
178	Fran	Rice
180	Don	Lupin



### Holiday Greetings from the Hardy Fern Foundation



### Hardy Fern Foundation

The Hardy Fern Foundation Newsletter is published quarterly by the Hardy Fern Foundation, P.O. Box 166, Medina, WA 98039-0166.

Articles, photos, fern and gardening questions, letters to the editor, and other contributions are welcomed!

Please send your submissions to Sue Olsen, 2003 128th Ave SE, Bellevue, WA, 98005.

#### Newsletter:

Editor: Sue Olsen

Assistants: Janet Dalby, Sylvia Duryee, Sue & Herman Entz

Graphics: Karie Hess

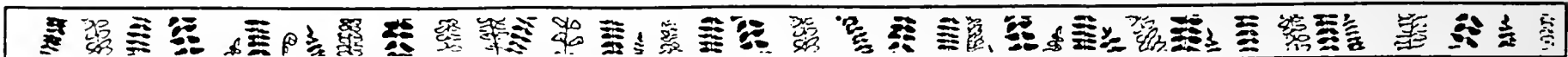
## Preliminary Report on the Germination of Spores Received from Japan October 1993

(Not all packets contained spore.)

*Acystopteris japonica*  
*Arachniodes standishii*  
*Athyrium niponicum*  
*Athyrium vidalii*  
*Cheilanthes argentea*  
*Crypsinus hastatus*  
*Deparia japonica*  
*Dryopteris championii*  
*Dryopteris chinensis*  
*Dryopteris crassirhizoma*  
*Dryopteris lacera*  
*Dryopteris sabae*  
*Dryopteris sacrosancta*  
  
*Dryopteris sieboldii*  
*Dryopteris tokyoensis*  
*Hypodematum crenatum*  
*Hypolepis punctata*  
*Plagiogyria matsumureana*  
*Polystichum craspedosorum*  
*Polystichum neolobatum*  
*Pteris excelsa*  
*Thelypteris acuminata*  
*Thelypteris decursive-pinnata*  
*Thelypteris japonicum*  
*Thelypteris laxa*  
*Thelypteris nipponicum*  
*Thelypteris quepaertensis*  
*Thelypteris vindefrons*

Fair germination  
 No germination  
 Some germination  
 Some germination  
 Good germination  
 No germination  
 No germination  
 Some germination  
 Poor germination  
 Good germination  
 Good germination  
 Good germination  
 Excellent germination (Best of the entire consignment)  
 Good germination  
 Some germination  
 No germination  
 Excellent germination  
 No germination  
 Some germination  
 Good germination  
 Good germination  
 No germination  
 Good germination  
 No germination  
 Some germination  
 Poor germination  
 No germination  
 Excellent germination

Many of these species were also distributed via the Hardy Fern Foundation's and American Fern Society's spore exchanges. If any members tried to raise them we would be very interested in hearing about your results.



### Board of Directors:

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